

Innovative Learning Week in the School of Chemistry - What's it All About?

The Vision

To provide Chemistry students with opportunities to take part in activities that will enhance their employability skills, explore methods of communicating science to a range of audiences, and help to make students feel part of the wider chemical community.

The aims are:

- To strengthen the sense of community within the School with a particular emphasis on engaging students in earlier years
- To develop key chemistry graduate attributes and hence enhance employability of our students
- To use a range of methods for communicating science to different audiences
- To make the activities fun for all!

How did we devise the programme?

Back in June 2011, the Course Organisers held a brain-storming meeting to generate some ideas about possible activities for Innovative Learning Week (ILW). Some weird and wonderful suggestions emerged! Common themes that surfaced were communication (to a range of audiences including non-expert public audiences), developing a sense of community, and doing things that are different and fun! These are pilot projects that are untested and so some activities may work better than others – let's not pre-judge and instead see what develops!

So this is what is happening in the week beginning 20th February.

1st Year

A part of our third, fourth and fifth year courses that seems to cause a disproportionate amount of stress is delivering a talk and presentation. So during ILW students will have an opportunity to practise these skills in a non-assessed situation, but with feedback available from staff and also a group of classmates.

There will be an introductory talk at 2pm in Theatre T250 in the chemistry building on Monday 20 February. The class will be divided into groups of approx. 5 and each group will be asked to prepare a short Powerpoint presentation which they will give on Thursday and Friday in the Chem 1 lab. The topic of the presentation is not fixed, but must be related to the material that students have covered in C1A / B.

We will be using the large screens in the lab connected to laptops (already booked out from IT) to allow four groups to present simultaneously. The groups will present to a staff member (C1 committee members + Dr Karim) and a number of their peers.

This will help students build a very important skill which will be needed not only in future years at University, but also for a job interview where short presentations are often asked for.

2nd Year

During Innovative Learning Week, mixed teams of chemists and artists from the Edinburgh College of Art will come together to "Communicate a phenomenon". Students' creations will be presented at the Edinburgh School of Art at the end of the week, and in the months to come may be published and presented at public venues such as Dynamic Earth or as part of the Edinburgh Science Festival! Engaging with public audiences is a key skill for scientists, especially if the public are being asked to fund science and place their trust in scientific research.

Details of the programme are included in the attached document. Students will be given a more detailed briefing on Monday 20th Feb from 9:30am in T250.

All of the plans for Innovative Learning Week are contained within the week itself; there is no need to make any preparations for it. The idea is to have fun, learn something, and to produce wonderful creations!

3rd Year

Monday 10.00-13.00: Chemistry 3 poster presentations in the central corridor. Peter Kirsop has organised a team of markers for this session.

Tuesday-Thursday: Chemistry 3 students sign up and attend whichever final-year project talks they want to. The students then write a short (<500 word) 'conference blog entry' on the talks -- or a particular talk -- that they have attended. A wiki page is being set up for this.

4thYear: Chemistry 4/5MX/5M

A research conference will take place on Tuesday, Wednesday and Thursday of the week in T100 and T250 from 9.30-5.15.

4th Year: Chemistry 4M/Chemical Physics 4M/MSc

The theme is "From Bench to Boardroom" – Developing Business and Innovation Skills for Chemists.

This will focus on developing students' understanding of the processes required to take a piece of laboratory research through to the design, development, and marketing of a product. These skills are important not only within industry, but also within academia – imagine being able to make money out of one's PhD research project! Feedback from industrial partners across a range of sectors has repeatedly stressed the importance of students gaining wider sets of skills in order to gain employment in an increasingly competitive employment market. The School has secured funding from the Royal Society of Chemistry to work in partnership with an independent consultant to design and develop a series of resources "Developing Business Skills for Chemists." These resources will ultimately be distributed to Chemistry departments throughout the UK. Interactive (and fun!) activities will include workshops on intellectual property, innovation, market research, marketing, pitching research ideas to the Board, and simple financial management, using real-life problem-solving case studies with input from industrial partners.

Please see attached outline timetable.

INNOVATIVE LEARNING WEEK - CHEM 2 meets ECA

MON 20th FEB

9:30am – 12:00pm Lecture Theatre T250, Joseph Black Building, King's Buildings

Briefing, Team Assignment, Preliminary ideas

12:00pm – 3:00pm Venues chosen by teams, but T250 may be available

Lunch, Idea generation

3:00pm – 5:00pm Central corridor, Joseph Black Building, King's Buildings

Storyboard ideas displayed, Feedback from peers

TUES 21st FEB Independent idea development within teams

All day *Available spaces include:*

GD/III UG Studio, 4th floor

GD/III MA, 2nd floor

Evolution house, 01 Hunter Building, Edinburgh College of Art

WED 22nd FEB

9:30am Independent idea development within teams

Staff available in Evolution House for questions/feedback

2:30pm Pub quiz in Edinburgh College of Art Canteen

THU 23rd FEB Independent idea/exhibit development within teams

All day *Available spaces include:*

GD/III UG Studio, 4th floor

GD/III MA, 2nd floor

Evolution house, 01 Hunter Building, Edinburgh College of Art

FRI 24th FEB Edinburgh College of Art display venue (to be finalised)

9:30am *Install exhibitions*

1:30pm *View exhibitions, Peer feedback*

Innovative Learning Week – Chemistry 4M/Chemical Physics 4M and MSc students

From Bench to Boardroom – Developing Business and Innovation Skills for Chemists

Monday 20th February		
09.30-10.15	Introduction to scope of activities	T40
	Assignment of Teams	
10.15 onwards	Teams assess 5 different projects and identify features and benefits.	1 st Year Teaching Lab
Tuesday 21st February		
09.30-12.30	Teams make an “elevator pitch” about each project. Teams choose 2 projects to study more deeply in following days.	Physical Teaching Lab
14.00-onwards	Teams split up – 2 do finance, 2 do Project Management, 2 do market research All/any market research students may do ‘Chemistry Stock Market’ game) All/any PM students may do ‘Leaning Tower of Pasta’ game All/any Finance students may do ‘SmithChem cash flow’ and ‘MiniGas Ltd’ case studies	Physical Teaching Lab
Wednesday 22nd February	Continue working on Case Studies	1 st Year Teaching Lab
Thursday 23rd February	Continue working on Case Studies	Physical Chemistry Lab
09.30-12.30		
14.00-onwards	Original teams reconvene and share information. Collate information into feasibility study template for 2 projects. Assess the projects and decide which one to recommend.	Physical Chemistry Lab
Friday 24th February	Write a 15 minute presentation of the preferred project	Physical Chemistry Lab
09.30-12.30		
14.00-16.00	Present to invited audience/judges	T40
16.00-17.00	Reception	Museum