

Imperial College
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Health & Safety Matters

BIANNUAL NEWSLETTER OF SAFETY
AND OCCUPATIONAL HEALTH

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CONTROLLING HAZARDS

PAGE 3

MANAGING SHARED SPACES

PAGE 4

PROVOST'S AWARDS - RESULTS

PAGE 6

IMPERIAL TECHNICIANS

PAGE 10

AUDIOMETRIC HEALTH SURVEILLANCE

PAGE 14

PAGE

2

Welcome to the
summer edition

Welcome to the summer edition of the health and safety newsletter

Safety Department Webpages

The Safety Department has been working hard on revamping and updating our webpages making it easier to find the information you need. These pages help us to share our knowledge and experience with all members of College to support all of our research and business colleagues.

www.imperial.ac.uk/safety

Safety Department on Twitter

The Safety Department has a Twitter account and the live feed can now be viewed on the front page of the Safety Department website. We welcome more followers and we will look towards keeping our feed fun and interesting.

.....@ICLSafety

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This edition is focussed at mentoring; whether for technicians, biosafety officers or auditors. We have a major feature on College technicians, and the mentoring and supporting provision available to them.

The newsletter is packed with an array of other topical articles, including:

- Why sometimes the leading researchers can get it so wrong when it comes to managing hazards
- Managing shared spaces
- What is Gross Negligence Manslaughter
- New health surveillance services being offered
- Barriers to learning.

We are also celebrating the success of this year's winners of the Provost's Awards for Excellence in Safety; for creative safety innovations and

management by both individuals and teams. Professor Ian Walmsley, Provost of Imperial College London, handed out the awards to our worthy winners.

We always welcome feedback so do tell us which articles you have found interesting and what you would like to see in future editions.

Together we can make the College a safer place.

Surrinder Johal,
College Director of Safety



Controlling hazards - even the best researchers can get it wrong

There are too many examples of great scientists who died from exposure to the substances they were conducting their research on:

- **Madame Curie (1867-1934)**, her continual exposure to the radioactive elements she isolated and her prolific use of x-rays in her nursing role in World War 1 led to leukaemia. She has been the only person to receive two Nobel prizes in science in two different fields: chemistry and physics.
- **Malcom Casadaban (1949-2009)**, an associate professor of molecular genetics and cell biology and microbiology at the University of Chicago. Casadaban was performing laboratory research on the bacterium *Yersenia pestis*, the bacterium that causes the plague, when he became sick and died from plague.
- **Richard Din (1987-2012)**, researcher at the Northern California Institute for Research and Education. The focus of his research had been developing a vaccine to protect against the bacterium *Neisseria meningitidis*. Richard came down with a headache and nausea, and he died of meningococcal disease 17 hours after the first symptoms appeared.

most effective way of preventing them is to eliminate the hazard or isolate it from the user so their actions are less likely to cause harm.

Risk assessment has become a standard term in the management of H&S over the last couple of decades. The aim of a risk assessment is to make sure that no one gets hurt or becomes ill. It involves identifying the hazards present as part of any project (whether arising from work activities or from other factors, e.g. the condition of the equipment, the premises) and evaluating the extent of the risks involved.

The results of a suitable and sufficient risk assessment determine whether additional controls are required and to identify the most appropriate ones. The best way for preventing a hazard from materialising is to:

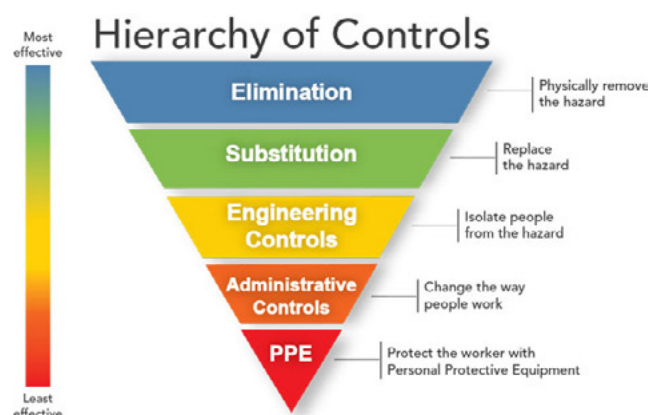
1. eliminate the hazard - **remove it**
2. substitute it for a less hazardous one - **replace it**, or
3. control it in such a manner that the user will not be exposed to it - **restrict it** with the implementation of engineering controls.

These three general principles address unsafe conditions and hazards, as well as unsafe acts. Administrative and Personal Protective Equipment (PPE) controls are often open to interpretation and are not useful at anticipating human behaviour.

It is key to stress that risk assessment **is not about** stopping people from being creative and innovative, and most definitely is not about generating paperwork; risk assessment **is about** identifying ways of enabling people to reach their full potential by accomplishing great things in a safe manner, implementing practical steps to protect them from the hazards that can cause harm.

Risk assessing processes and the implementation of controls are often perceived as tedious tasks- think about the stress of dealing with the aftermath of a materialised hazard! It is our duty to prevent accidents from happening, it is our obligation to select controls that deal with the root cause of foreseeable issues. Emergency/crisis management is morally, mentally, ethically, reputational and financially more damaging than proactive risk management.

With the exception of Madame Curie, the accidents that lead to the death of these scientists did not happen due to lack of knowledge but, presumably, because somewhere along the process, the knowledge they had was not applied effectively. We refer to this type of error as behavioural or human error and the



Don't leave for tomorrow the hazards you can control today!



Managing shared spaces: A Faculty perspective from Professor Simon Taylor-Robinson

Since taking on the role of Health and Safety Champion in the Faculty of Medicine, my main focus has been on the safe management of shared spaces within FoM, chairing FoM's recently created Shared Spaces Working Group.

The group's aim is to ensure that where we have shared spaces, the management of the space is clarified and the 'rules' relating to its use are communicated to all parties sharing that space. We hope that any good practice we identify or develop can be shared throughout the College.

As a first step, the group carried out a review of existing arrangements in FoM for access, training, safety, monitoring and maintenance of their shared spaces.

The group's findings so far:

- There are a large number of spaces in FoM which are either shared with, or interface with, space controlled by a site partner. This is an inevitable consequence of the close connection that FoM has with the NHS in relation to research, teaching of medicine students and clinical work.
- The concern in many areas is access control; for example, sometimes an area managed by College is subject to Trust access control.

- In most cases a simple agreement between the parties is all that is needed. For example, defining who controls access, who provides training on equipment operation.
- In some cases there is lack of clarity over the management of the area and who is in control.

There is much work still to do, but with the amount of collaborative work in FoM on the increase, it is timely that we review how we manage shared spaces.

Professor Simon Taylor-Robinson
Safety Champion Faculty of Medicine

HEALTH Snippets

Cycle to Work Day 8 August 2019



Cycle to Work Day is the UK's biggest cycle commuting event. Every year since 2012, we've seen thousands of enthusiastic riders hit the streets to celebrate everyday cycling. All you need to take part is a bike – new or old – and the desire to ride. You can go solo or be the change your workplace needs and organise an event for you and your colleagues. Whatever you do, however far your ride – have fun!
www.cycletoworkday.org/

Imperial also support cycling, whether for pleasure, sport or just a means to get from a to b, everything you need to know about cycling at Imperial can be found at www.imperial.ac.uk/sport/being-active/cycling-at-imperial

Universities Safety and Health Association Annual Conference

University of Newcastle, 23-25 April, 2019



The Universities Safety and Health Association (USHA) is an organisation for the promotion of safety and health in higher education. Membership is primarily open to higher education (HE) institutions both in the UK and from overseas. The Association was formed in 1972 and has grown over the years to its current cohort of 143 Institutions representing all Universities in the UK and 13 overseas. USHA's mission is to ensure the wellbeing of university staff, students and visitors through the promotion of health

and safety within higher education.

Surrinder Johal and Ana Pedrero-Llamas recently attended USHA's 47th Annual Conference entitled: Perspectives – Taking the Wider View of Excellence. The conference addressed safety, wellbeing and estates issues with contribution from not only the HE sector but many other organisations including Highways England, Thames Tideway, Eversheds Sutherland and London North Eastern Railway.

Of particular interest were presentations on achieving health & safety training success, use of behavioural science frameworks to promote health & safety and health and safety leadership. Parallel workshops allowed discussion round delivering compliance, wellbeing and engaging with the Vice Chancellor Community while networking opportunities focussed on specific issues like homeworking, out of hours working, safety structures and budgets.

Act, Don't Ignore: BP-ICAM Leads the way for safety engagement

A team from across the BP International Centre for Advanced Materials (BP-ICAM) collaboration has created an award-winning series of short films designed to engage ICAM researchers and academics with laboratory safety.



THE AWARDS 2019

Applications have opened for the first ever Times Higher Education Outstanding Technician of the Year Award. This accolade, sponsored by The Technician Commitment, will be given to an individual whose exceptional practical skills, commitment and vision have enabled the highest quality of teaching, research or knowledge transfer.

The award is open to technicians working in any discipline in UK universities and research institutes. Judges will be looking for evidence of a technician's essential contribution and would like to hear examples of outstanding work.

If you want to participate in the future but don't know where to start contact Ailish Harikae at a.harikae@imperial.ac.uk for support.

The three-part film series, entitled **"Act, Don't Ignore"**, is a project devised and created by communications and safety professionals from British Petroleum (BP), the University of Manchester and Imperial College London, who already work together as part of the BP-ICAM collaboration.

Each of the films focusses on a real-life incident to highlight the importance of safety within laboratory environments for ICAM researchers from Ph.D. students to professors. The team interviewed people involved with these stories to create poignant and emotive films which allow the viewer to learn vicariously from past incidents which range in severity from an electrical shock to life-threatening first-degree burns.

Nicolas Armao, HSSE manager for group technology at BP, said: "Safety is our number one priority at BP and we're passionate about working with our research collaborators to increase their engagement with operational and laboratory safety. The 'Act, Don't Ignore' film series is a fantastic example of how working together with the BP-ICAM universities we are able to make a real difference and learn from each other."

In October 2018, the BP-ICAM team scooped the Platinum Award for best Strategic Internal Communication Campaign at the MarCom Awards and won Bronze at the Brand Film Festival Awards, which took place in London on 1 May 2019. The BP-ICAM safety campaign has been nominated alongside other digital content from WaterAid and HSBC in the 'Issues and Crisis Management' category.

Speaking about the recent award nominations, Alexander Chilton, Communications and Marketing Officer for the BP-ICAM, said: "We've already received great feedback from researchers across our international partnership who are based at the Universities of Manchester, Cambridge, Illinois at Urbana-Champaign and Imperial College London. They tell us that the films are changing perceptions and helping them to engage in difficult safety conversations with their colleagues and peers. We're delighted that all the hard work the team put in to create this safety engagement campaign last year is now being recognised externally through our recent awards."

Dr Surrinder Johal, Director of Safety at Imperial College London, added: "We were all so impressed about how the films turned out and couldn't have imagined how impactful they would be when we were planning them back at the end of 2017. They are already making a difference to our safety engagement efforts across the College and I can't wait to help create some more."

The **"Act, Don't Ignore"** film series was produced by the BP-sponsored International Centre for Advanced Materials in collaboration with **Tilling Creative**, a London-based video production agency.

The videos can be accessed by internal staff on the following link: www.imperial.ac.uk/safety/safety-videos



Provost celebrates Imperial's outstanding health and safety champions

Imperial staff were recognised for their exemplary management of health and safety at the Provost's Awards for Excellence in Health and Safety. Read on for details.....

Imperial's Provost, Professor Ian Walmsley, hosted his first awards ceremony **since joining the College last year**, and praised staff for going "above and beyond" to promote safer ways of working.

He said: "The integrity of our actions and environment underpin our world class teaching and research, and excellence in health and safety is a vital part of this."

"Today is an important event to mark the contribution of our committed health and safety professionals, as well as our colleagues who have gone above and beyond in their commitment to the safety and wellbeing of others."

The Provost also highlighted the work that has gone into revising the existing **Health and Safety Policy Statement** which will soon be rolled out across the College, and commended the Safety department and other colleagues for improving the rate of incident reporting.

Boosting lab safety

Eddie Benbow, a Thermofluids Technician from the **Department of Mechanical Engineering**, won the individual award this year. He was recognised for introducing a safer way of containing different gases required for combustion analysis.



Eddie was nominated by **Professor Peter Cawley**, Head of the **Department of Mechanical Engineering**, for having

an "ever-present watchful eye for lab activities."

Professor Cawley added: "Eddie is professional and knowledgeable about his health and safety responsibilities. Whilst being approachable and helpful, he carries out a lab management role in an assertive and conscientious manner." Reflecting on his win, Eddie said: "I enjoy working at Imperial as the work is challenging and varied, and there is a good team of support staff with whom I have great working relationships. I feel proud to receive this award as it was unexpected - I really appreciate that my efforts have been acknowledged."

Eddie was also noted for taking on a voluntary role and receiving training in Lifting Operations and Lifting Equipment Regulations (LOLER). He has promoted the Department's new code of practice for heavy and mechanical lifting operations, helping to ensure that necessary assessments are made, lifts are undertaken safely and that records are maintained.

SAFETY Snippets

Olga Kuzmina, Faculty Safety Manager within the Faculty of Natural Science safety team was also recognised last year as ‘one of the influencers and innovators shaping the sector’s future’ in the competition ‘40 under 40’ run by Health and Safety at Work Magazine.

The Faculty put forward her nomination to the magazine judging panel who scored each candidate in three areas:

- personal and professional achievement
- evidence of innovation or divergent thinking
- contribution to safety in its widest sense

Read the full scope of the awards at www.healthandsafetyatwork.com/feature/winners



The chemistry behind teamwork

The **Faculty of Natural Sciences** Safety Team along with Matt Moderate, Health and Safety Technical Officer in the Safety department, scooped top prize for the team award. They won for their outstanding professionalism and teamwork throughout the transfer of the **Department of Chemistry** from Imperial’s South Kensington Campus to their new home in the **Molecular Sciences Research Hub (MSRH)** on the **White City Campus**.

Stefan Hoyle, Head of Health and Safety (Faculty of Natural Sciences), said: “As part of this move, our team were involved in everything from the design of the MSRH building to creating an induction programme that allowed our colleagues to move in safely.

“We moved 50,000 chemicals over from South Kensington to the MSRH, and had to implement a system to

sort, segregate and organise the substances to avoid any accidents. “We learned a lot from this move and this year, Imperial is going to introduce a new software called **LabCup**, which is used for chemical management. We are sharing best practice from the move with other departments as well, so that they can also be more efficient, have more storage space and better spend their budget when dealing with chemicals.”



Professor Alan Armstrong, Head of the Department of Chemistry, nominated the team, saying: “Their exceptional professionalism and teamwork led to successful implementation of numerous new safety policies and procedures. Their outstanding work put safety culture at the forefront from day one in the new building. In addition, they ensured successful coordination of the move and safe clear-up at the old site.”

The Faculty of Natural Sciences Safety Team consisted of Stefan Hoyle; Olga Kuzmina (Faculty Safety Manager); Emma Edwards (Faculty Safety Officer); Anthony Marchant (Faculty Safety Officer); Richard Price (Electrical Testing Technician); Jochen Brandt (Research Associate).

Highly Commended award winners

Provost Ian Walmsley also presented awards of high commendation to:

- Graham Brooks, Senior Research technician representing the Hamlyn Centre team winners.
- Carlos Lozano of Residential Services
- Diana Nguyen of the Department of Chemistry
- Erin Hallett of Imperial College Business School

A Secondment to Bio Safety



Rebecca Pearson joined the Safety department on secondment from the Faculty of Medicine in October of 2018.

Six months on she gives a personal account of working within the college Safety department...

Coming towards the end of my six month secondment to the safety department I look back upon what has been a challenging but extremely rewarding opportunity to work with a passionate and hardworking group of safety professionals.

When I first saw the secondment advertised it really appealed to me, primarily as an opportunity to further my knowledge of biological safety and, undertake a full time safety role as this was a career path I was considering. I was also interested in comparing what it would be like to work for central College at South Kensington. My current role is laboratory manager within the Department of Medicine based at the Hammersmith Hospital site. Following an interview process, I was very pleased to be subsequently accepted for the secondment and for the support given to me from both Departments.

The Department of Medicine had to source cover for my role at Hammersmith and College safety were flexible on their start date, which allowed the transition to be as smooth as possible.

During the secondment I have had the opportunity to undertake a wide range of work in biological safety including;

- inspection of the Colleges many and varied containment level 3 facilities,
- reviewing of new biological risk assessments,
- attending local GM committees,
- designing a new risk assessment form to capture the work using invertebrates,
- managing RADAR - the College risk assessment database
- collating the use of biological toxins across the college.

I have also begun the development of an e-learning module for training in the use of microbiological safety cabinets which I hope will be of wide benefit to the College community when it's released. Being located with other members of the safety department as well as the Biological safety team has also shown me the incredibly wide variety of work the team deal with including safe sharing of space with the various NHS Trusts, servicing of engineering control measures, monitoring noise, radiation safety, chemical safety and even business continuity. Being in such a multidisciplinary environment means I have gained knowledge beyond that related to biological safety and which I know will be very beneficial to my career going forwards.

I would really encourage anyone in a position similar to my own, looking at various future career paths, to undertake a secondment given the opportunity as it really gives you perspective on where you are now as well as where you want to be in your future career. I have learnt so much that I will be able to use going forwards both in my current role and in my future career and had the opportunity to work with some great people as well.





Getting to know you – staff spotlight



Darran Hickey joined the Safety department as Office Manager back in December 2018. Six months on we put him in the staff sp[otlight...

Where were you born? Northwick Park Hospital, Harrow.

Where did you study? Harrow - that is, the London Borough of Harrow not the public school of the same name...

Where do you live/who do you live with. I live in Hertford with my fiancée (and soon to be wife!) and 10 month old son.

Describe your work in general and what you are currently working on. I try to facilitate the smooth (!) running of the Safety Office; looking at current systems and processes to try and improve our work, ensuring the finances of the Office run to budget, and I work across a number of other strands of work that the Safety Office currently coordinate. I am currently shadowing Julia Cotton and Audrey Plaquin-Chan to a number of inspections to see if I can assist with their work in any way.

What aspect of your job excites you most? Learning new things! I am completely new to Health and Safety so every day is a school day!

What are your hobbies? I love sport – while I am growing more disillusioned with football (I'm a long time Barnet-supporting sufferer) I still love cricket, horseracing and rugby.

Describe yourself in three words. Friendly, generous, eager-to-help (is that one word?!)

What would be your Desert Island Disc? The Stone Roses, I Am The Resurrection

What phone app would you recommend? Yoyo Wallet, if only for the fact I spend such a silly amount on coffee at Imperial, that it means I get a (minor) benefit of a free one every now and then...

Do you have a funny, or interesting, or embarrassing story you can share? I challenged Sebastian Coe to a race once. He declined, meaning I won by default.



Can you recommend any information resources that have been useful for you in your work? The Imperial College website has actually helped with a lot of the terminology. Google has been invaluable for the acronyms! Health and Safety is dominated with acronyms, but it's no different from Finance or Local Government (my previous sectors!)

What are the little things in life that make your day better? The beaming smile from my son as I walk through the door after a day at work – the absolute highlight of my day!!

What's the most exciting or interesting thing you have ever done? I went to an Irish wedding one Saturday, and then flew straight to a Scottish wedding the day after on the Sunday. I didn't change out of my suit and it took me a few days to recover from those...

What's your favourite meal? Good old steak and chips



What's your perfect day? As much of a lie-in as my 10 month old son will allow, a decent walk around Hertford, popping into as many pubs along the way as I can, end up at Lords (somehow!) to watch some cricket as the sun sets....

What would be your dream holiday, assuming unlimited money and a month off? I always think it would be somewhere hot and sunny far, far away, but I inevitably get bored on those holidays, so I guess using trains to travel around Europe, Russia and into China would be pretty eye opening.

When you were young, what did you want to be when you grew up? A sports journalist. I thought I had a knack for it, but regrettably, didn't seem to have the requisite patience or ability!

Share a fascinating fact. I can recite the alphabet backwards really quickly!

Imperial Technicians

The Technician Commitment

The Technician Commitment is a university and research institution initiative supported by the Science Council and the Gatsby Foundation. It aims to ensure visibility, recognition, career development and sustainability for technicians working across the sector. Imperial College was one of the founding signatories and is now one of 75 institutions across the UK to have pledged to support their technical staff.

Being a Technician Commitment signatory involves developing and implementing a 24 month action plan to support our technicians. Informed by technician representatives from across College, discussion at technical manager forums and staff surveys, Imperial's plan contains nearly twenty actions, which range from publishing a bi-monthly e-newsletter to providing a structured programme for technicians to achieve professional registration. The full plan is available on the College's Technician Portal www.imperial.ac.uk/technicians-portal.

As a founding signatory, Imperial was invited to a prestigious event at the Tower of London in November 2018 to mark one year since the launch of the initiative. Attending on behalf of the College were Lindsay Comalie (Learning and Development Centre), Allison Hunter (Department of Life Sciences) and Alastair James (Advancement), who were presented with a commemorative plaque in recognition of Imperial's exceptional progress to date. At the event,

Lord Sainsbury said that what had been achieved so far by signatory institutions had "exceeded all expectations". You can read more about the activities of signatory institutions by downloading the Technician Commitment: One year in report from www.gatsby.org.uk/uploads/education/technician-commitment-one-year-in.pdf. To find out more about the Technician Commitment, please contact Ailish Harikae: a.harikae@imperial.ac.uk.



Mentoring for Technicians

- Do you have an interest in helping and developing others?
- Do you have a non-judgemental attitude?
- Do you have a range of experience and a variety of workplace skills?

Then mentoring could be for you! The Learning & Development Centre is recruiting for its new mentoring service for staff in professional, technical and operational services. Mentoring is based on a relationship of mutual trust and sharing of experience and has been successfully used to support career development in a number of organisations. The mentor plays the part of a role model for the mentee, providing more insight into career progression, understanding organisations and exploring options. For mentors, it can be an opportunity to contribute to the community, learn from those with a different perspective and to enhance

interpersonal skills such as listening and questioning.

New mentors join a three-hour briefing session, which provides an overview of the main stages of the mentoring relationship, the role and responsibilities of mentor and mentee, and how to build, maintain and sustain positive mentoring relationships. To book a place on a session, visit the **Mentoring at Imperial** website: www.imperial.ac.uk/staff-development/development-options/talent-development/mentoring-at-imperial.

Details will be publicised soon for staff who would like to request a mentor under the new scheme.

The Faculty of Medicine (FoM) already has a successful mentoring programme open to all its staff – academic, teaching, early career researchers, professional and technical. FoM staff who are interested in finding a mentor or becoming one will find details of the scheme on the **Mentoring in the Faculty of Medicine** webpage: www.imperial.ac.uk/staff-development/development-options/talent-development/mentoring-at-imperial/mentoring-in-the-faculty-of-medicine/.

Technical Managers' Fora



Technical Managers' Forums are open to all technical managers and supervisors at Imperial. They provide an opportunity to build links, explore areas of common ground and share ideas. Nearly 40 managers attended our January Technical Managers' Forums in South Kensington and St Mary's. The South Kensington event focused on Campus Security. Nigel Ward, Crime and Investigations Manager, gave an informative talk covering buildings and access, security around campus, keeping personal possessions safe and

personal safety and travel.

The theme of the St Mary's event was mentoring. Heather Combe, Faculty Safety Advisor (Medicine), gave an engaging talk on her personal experience of mentoring (see opposite) and the

positive impact it has had on her career. An important message was that technical staff often mentor others informally without even realising it - students, colleagues, apprentices, direct reports - and will probably have benefited from mentoring at some stage in their careers too.

To book a place at future forums, email [Ailish Harikae a.harikae@imperial.ac.uk](mailto:Ailish.Harikae@imperial.ac.uk).

My Mentoring Experience

Heather Combe

Throughout my career I have been privileged to experience informal mentoring in a number of situations, starting when I was a student. In a variety of jobs I had colleagues who encouraged and inspired me to learn, and taught me skills over and above my job description. These included negotiating contracts, project management, and event planning, all of which have helped in my subsequent roles as a technician, lab manager, and now Faculty Safety Advisor.

As a fresh graduate, in my first laboratory technician position, the senior technician in our group provided invaluable insight and wisdom, helping me to navigate a complicated management structure and work environment, and encouraging me to ask for additional training and responsibilities. As someone with a long career in technical support, she was a source of great objective advice when I was looking at my own options and applying for jobs elsewhere. This experience motivated me to try to provide similar support to the students and staff I have worked with since.

Working Towards Professional Registration – Pilot Course for Technicians

Imperial College has launched a brand-new programme to guide technical staff and managers through professional registration with the Science Council. Professional registration is a great way for technicians to demonstrate their knowledge, skills and experience. It shows peers and employers that you are committed to your profession, builds confidence and can bring a whole host of other personal and professional benefits, whatever stage you are at in your career. Led by an applicant support mentor from the Science Council, this new programme demystifies the process of becoming professionally registered and supports participants to make

an application. There are fifteen technical staff and managers from six departments participating in the pilot and they are working towards joining a variety of professional bodies as either Registered Science Technicians (RSciTech), Registered Scientists (RSci) or Chartered Scientists (CSci). We hope to expand the initiative next year to support technicians who wish to take up professional registration as Registered IT Technicians (RITTech), Engineering Technicians (EngTech), Incorporated Engineers (IEng) or Chartered Engineers (CEng).

If you are interested in joining a future cohort, please register your interest with the course organiser: a.harikae@imperial.ac.uk.



'Team Science' and Career Pathways for Technicians

In March 2016, the Academy of Medical Sciences published a working group report on improving recognition of team science contributions in biomedical research careers. This report highlighted the importance of 'team science' – defined as output-focused research involving two or more research groups – in addressing complex research challenges. Three years on, the Academy published a follow-up report, which includes among its recommendations that

institutions establish clear career paths and development opportunities for skills specialists and technicians, who make a vital contribution to team science. The report is well worth a read and includes an interesting case study on the University of Glasgow, which has implemented parallel career tracks for traditional researchers and technical staff. Read the full report at www.acmedsci.ac.uk/policy/policy-projects/team-science

To keep up to date with training and development opportunities for technicians and other news and updates, sign up for our bi-monthly Technicians' Network Newsletter at www.imperial.ac.uk/technicians-portal/technicians-network/newsletter



NEWS Snippets

Imperial College joins National Technician Development Centre

Imperial College has joined over thirty higher education and research organisations to become an affiliate member of the National Technician Development Centre (NTDC). Based in Sheffield, NTDC was established to provide the sector with information, expertise and a range of research and tools designed to support the delivery of high-quality technical services. Partnering with NTDC will allow Imperial to access specialist support for a number of Technician Commitment projects.

Visit NTDC's website to find out how the Centre supports high-quality technical services: www.nationaltechnicianscentre.ac.uk.



National
Technician
Development
Centre

PARTNER AFFILIATE

Welding Activities, Including Mild Steel: A Change in Control Requirements

The International Agency for Research on Cancer has recently shown new evidence that exposure to mild steel welding fume can cause lung cancer and possibly kidney cancer in humans. Because of this reclassification, a higher standard of exposure reduction is now required. Under the Control of Substances Hazardous to Health Regulations 2002, all employers have a duty to reduce the exposure to carcinogenic substances to "as low as reasonably practicable".

To reflect this, all welding areas will need to upgrade their existing controls to include local exhaust ventilation (LEV) in combination with respiratory protective equipment (RPE). Where welding takes place outside, this will need to be done with appropriate RPE.

For assistance specifying the correct LEV and RPE, or to confirm that your existing requirements are sufficient, please contact the College's Health and Safety Technical Officer, **Matt Moderate**.



Gross Negligence Manslaughter

We are familiar with the penalties at Crown Court of unlimited fines within a range and up to two years imprisonment at Crown Court for health and safety offences. However, a visit to Eversheds Sutherland Solicitors for a Legal Update by Philip Crosbie highlighted the issue of Gross Negligence Manslaughter under the Criminal Justice Act 2003. Effective from 1 Nov 2018 in England and Wales the Sentencing Council issued guidelines for a more consistent sentencing policy for all offences including gross negligence resulting in deaths at work. The balance of punishment applies equally whether the death(s) occurs in the workplace or as a result of a common street assault.

New Chemical Inventory and Laboratory Management System

A new inventory management system called LabCup was implemented within the Chemistry Department of the Faculty of Natural Sciences, for the management of chemicals and chemical weapons precursors. The system was instrumental for the successful move of the Chemistry Department to White City (see article on page 7).

LabCup has increased chemical safety throughout the Department; through its ability to store safety data sheets, establish an approval system for high hazard chemicals, and help prevent improper chemical segregation. It also

Gross Negligence manslaughter is a common law offence and there are four tests that must be established:

1. A Duty of Care was owed to the deceased.
2. That duty was breached by the individual.
3. The breach resulted in “gross” failing which amounts to “a crime against the state and conduct deserving punishment”.
4. The breach must have caused or contributed towards the fatality as a result of action or omission.

The sentencing range depends on an individual’s level of “culpability” and ranges from 1 to 18 years. This does bring into sharp focus the role of Chief Executives, Directors and Heads of organisations as individuals when making decisions on health and safety compliance. This is in addition to the established principle of a Director’s disqualification of up to 15 years as the “directing mind”. Health and Safety professionals will read with interest recent cases relating to gross negligence manslaughter, namely Shoreham air accident; Hillsborough football tragedy and future cases like the Grenfell fire.

Philip Crosbie of Eversheds Sutherland Solicitors currently delivers Safety Leadership Training at the College www.imperial.ac.uk/staff-development/safety-training/safety-courses-/safety-leadership-training/

allows for greater chemical visibility throughout the Department, which encourages an ethos of sharing and recycling of chemicals.

The overall aim is to launch LabCup across the entire College for chemical management. Over the next few months, LabCup will be implemented within Life Sciences as a pilot to help identify the set-up and processes required for successful implementation. Formalised guidance is under development, which includes highlighting what equipment and resources that would be required, as well as any personnel requirements.

HEALTH Snippets

Skin and Handcare



At work our skin is exposed to a diverse range of substances and environments which can affect it. Being a complex structure, the skin provides a range of essential functions. It is the body’s first defence against physical, chemical and biological hazards. Its integrity is important.

Work-related skin problems are very common. Although skin problems can happen in most workplaces, certain jobs and activities present a higher risk.

Further information relating to protecting your skin at work, how and when your skin can become damaged through work, how to check to determine if your work is affecting your skin and what to do about it if it is can be found at:

www.imperial.ac.uk/occupational-health/health-protection-at-work/skin-and-handcare/

Audiometric Health Surveillance

Chris Allan, Senior Advisor in the College Occupational Health Department introduces their audiometric health surveillance program



HEALTH Snippets

National Picnic Week

21 – 30 June 2019

Have a picnic to remember this summer!



National Picnic Week takes place this June across the UK so grab your blankets and baskets out of the cupboards and get out to the great outdoors for a good old fashioned picnic.

Picnics are on the rise in the UK, with more people choosing to spend time away from phones and other devices, and spending some quality time with friends or family instead.

It's proven that getting some fresh air and sunlight is good for you, and enjoying some healthy home cooked food is the perfect way to relax without breaking the budget. Read more at www.nationalpicnicweek.co.uk



The Control of Noise at Work Regulations 2005 place a duty on the employer to:

- make sure the legal limits on noise exposure are not exceeded;
- maintain and ensure the use of equipment you provide to control noise risks;
- provide your employees with information, instruction and training; and
- carry out health surveillance.

To help Imperial carry out these duties, a program has been introduced by Occupational Health for individuals who have been identified as being exposed to noise levels in excess of the 85db action level. This follows a series of investigative noise surveys undertaken by the College Safety Department. Introduced for Civil Engineering, this was then expanded to include staff regularly working in the IT data centre. It is anticipated that this program will expand further as more locations are surveyed.

Anyone regularly exposed to noise above the upper exposure action values (daily or weekly exposure of 85 dB; peak sound pressure of 137 dB.) will be included in the Health Surveillance programme for audiometry. Generally, this will be

most relevant for those whose work involves using noisy powered tools or machinery; explosive sources such as cartridge operated tools or detonators, or noise from impacts such as hammering, pneumatic impact tools. In addition, some specialist IT technicians attending off campus server facilities have also been included. For more information on the potential for noise exposure in your workplace, please contact your local safety officer.

Aim

The aim of health surveillance is to reduce the incidence of Noise-Induced Hearing Loss (NIHL) by:

- Raising awareness of workers to the risk and means of control.
- Early detection of NIHL.

Initial audio health surveillance helps achieve this by:

- Identifying high-risk workers who may require additional protection or monitoring
- Collecting baseline data for use in periodic monitoring
- Providing information to staff on how to avoid exposure and on the health surveillance.

Accident and Incident Reporting

Keeping records of any incident or near miss that occurs in the College is an important job that we are all tasked to do when the need arises...

The College Salus system, an electronic recording tool which was launched in 2011, is available for all staff to enable them to register any incident or near miss in which they are involved, as either an observer, first responder or casualty.

Follow up is key to the prevention of further incidents

The identification of immediate and underlying causes of accidents and incidents to ensure that remedial actions are taken and lessons are learnt must be completed. Accident investigation is therefore an important and integral part of reactive health and safety management and complements other proactive management systems.

All information can be found at...
www.imperial.ac.uk/safety/safety-by-topic/accidents--incidents

Learning and Development

Barriers to Learning

The belief that participants undertaking study are more likely to succeed if they received information in their preferred learning style is commonly held. However, this belief does need to be challenged as individuals usually self-report their preference without any cognitive assessment or established framework. For those participants with learning difficulties a cognitive assessment is vital. The reality is that there are many different models of learning styles than the 3 often quoted Auditory, Visual or Kinesthetic. We process sensory information in lots of different ways that educational psychologist and neuroscience are exploring.

The Learning and Development Centre (LDC) is often told by participants that they prefer a taught classroom session rather than taking an e-learning route. There is a tendency for learners to create psychological barriers in accessing e-learning rather than the actuality. Given that learners can access a wide safety training portfolio means that individuals can blend this knowledge with work based e-learning. The issue is more one of good design and pedagogy.

The blended e-learning approach can be effective: NEBOSH National General Certificate at the College transitioned from classroom to e-learning from Sep 2015. Although there was some initial reluctance a recent review revealed interesting results.

Sep 2015 – Dec 2018 e-learning

- 19 successful completions
- 6 Distinctions
- 5 Credits
- 8 Passes



There are some common themes that successful participants share.

1. They have a safety related role and have responsibilities where they can make direct links between what they are studying and their work activities.
2. They clearly have thought about their learning path, utilising existing learning opportunities, building up their knowledge in a planned and managed way.
3. They are intrinsically motivated to study and can balance competing demands.
4. They are mindful about testing their knowledge and have a clear revision plan.
5. They are supported by their line managers who recognise the importance of safety training and successful completion.

The current evidence is that blended online e-learning is an effective tool and many of LDC foundation safety training Fire Safety and Prevention, Radiation Protection and Gas Safety use this format with great success.

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If you have any comments, articles or suggestions for inclusion in the Newsletter, please contact the editor Alison Church
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Incident case study – Process Change Resulting in Near Miss

What Happened?

Solvent Purification Systems (SPS) are widely used to provide dry and de-oxygenated solvents for use in research. These systems (pictured below) operate by pressuring solvent storage vessels using an inert gas supply, such as Nitrogen, causing the solvent to then travel through filter columns before being dispensed. In February 2019, two researchers

notified their Faculty Safety team that during dispensing of Tetrahydrofuran (THF) solvent from the SPS, the pressure generated in the collection flask caused a glass stopper in one of the necks to be projected out and shatter on the ceiling. This was unexpected as the collection vessel is kept under vacuum and the operating pressure of the Nitrogen supply was showing as within the acceptable range.



Why did this occur?

The regulators on the SPS reservoir kegs were not in use because the initial house nitrogen supply pressure was the same as the recommended solvent keg pressure, and therefore secondary regulation to the keg was not needed. However, it became necessary to increase the pressure of the house nitrogen supply to operate other equipment in the lab. Unfortunately the effect on all equipment already connected to the supply, such as the SPS, was not considered, which resulted in a pressure build up in the kegs. This was then released when the solvent was being dispensed and caused the glass stopper to be projected.



Preventative actions taken to prevent recurrence

The secondary regulators on the solvent reservoir kegs were put into use at the correct operating pressures to prevent increases in Nitrogen pressure to the SPS. It was recommended that prior to any change to house nitrogen supply pressures, all equipment be assessed to reduce risks in the future. In addition, standard operating procedures for refilling and checks on the pressures in the kegs to SPS were implemented.

Department advice for all research groups and support staff

As this appeared to be a relatively minor change in process, checks on other equipment were not considered, which then led to the near miss. The lesson communicated to staff and students is that even relatively small changes in process or procedures can have serious consequences when dealing with items under pressure, so ensure any changes are always assessed and the findings peer reviewed by others.

LEARNING FROM INCIDENTS

Learning from incidents is an essential element of safety management.

As such, we plan to make this subject a regular feature of future editions of Health & Safety Matters.

This will act as a means of publicising particular cases, and will attempt to focus on those issues that have College-wide implications