



# Student Education Bulletin

## The PGT Issue

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## Developing PGTs' skills for research and the workplace

Dan Pullinger, Leeds University Library and Michael Rapport, School of Food Science & Nutrition

Skills@Library works in partnership with academic staff to design, develop and deliver curriculum-based academic skills activities. We have recently collaborated on a module with the School of Food Science & Nutrition that uses blended learning and problem solving to equip taught postgraduate students (PGTs) with the skills they need for both scientific research and future employment.

FOOD5405M: *Professional Development for Employment and Research* is designed to provide PGTs with a range of transferable skills in the fields of: (i) scientific reading, writing and presentation; (ii) laboratory practice and experimentation; and (iii) data collection and analysis. The module guides students along the process of scientific research, from formulating a hypothesis through to disseminating their results to a wider audience.

The module aims to develop a suite of skills that are essential in either academic or industrial settings, including: information retrieval and evaluation; scientific writing; oral presentation; research design and hypothesis testing; generic laboratory skills; data analysis and manipulation; and basic statistics. Emphasis is given throughout the module to the importance of the scientific method, rigorous research design and independent thinking for successful problem solving.

The majority of students on the School's PGT programmes have not previously studied in the UK. We therefore designed this

module to support the particular needs of international students from a diverse range of backgrounds and experience, whilst also providing content that will benefit those students who have previously studied at UK institutions.

### How the module works

Students first evaluate their own competencies and skills and identify needs for further training through an online skills audit. The audit is repeated at the end of the module to encourage students to reflect on their development. They then participate in

### Contents

- |   |  |    |   |
|---|--|----|---|
| 1 | Developing PGTs' skills for research and the workplace | 9  | PGT@UoL – what the figures tell us                              |
| 3 | The Pro-Vice-Chancellor's Leader column                | 9  | Student Opportunity & Enhancement update                        |
| 4 | Student perspectives                                   | 10 | Mathematical modelling in the faculties of MaPS and Engineering |
| 5 | Helping students in Leeds drink responsibly            | 11 | Hands on the Future review                                      |
| 6 | PGTs – they're a bit different, aren't they?           | 11 | News & updates  |
| 8 | The ethically aware Leeds graduate                     | 12 | SEC4 2015 – call for papers                                     |

The next issue of the Student Education Bulletin publishes in October 2014 • Copy deadline is **Monday 1 September 2014** • The Bulletin is also available online at [www.leeds.ac.uk/soe/bulletin/index.html](http://www.leeds.ac.uk/soe/bulletin/index.html) •

a series of online tasks, face-to-face workshops and assessments, which are mapped to the different stages of completing a specific research task. Threading one topic throughout the module and its assessments helps to reinforce the benefits of developing and applying particular skills to solve a complex problem in their field.

In this case, we use the topic of salt concentration in bread due to its relevance to all of the School's PGT programmes of study, and because of the following observations:

- Salt is important in bread processing, modulating yeast activity and extending shelf-life;
- Bread is a staple food in the UK and a main contributor to salt consumption in the UK population;
- Salt is associated with positive and negative aspects of health; and
- Reducing the salt content of bread will have effects on the health of the UK population.

Students are expected to:

- Review the literature to discover what other scientists have published in this field;
- Come up with a working hypothesis concerning salt concentration in bread;
- Choose a number of bread samples/brands appropriate for testing their hypothesis;
- Conduct an experiment to analyse the salt content of a number of brands in order to verify or falsify their hypothesis; and
- Conduct an experiment to survey the level of consumption of salt in UK residents and determine whether bread is a main contributor to salt intake.

In the scientific reading, writing and evaluation strand of the module, students are introduced to various academic skills topics, including literature searching, referencing and critical thinking, through a series of generic Skills@Library resources and exercises hosted in the VLE. These online resources help to ensure that all students have reached a minimum level of understanding before they engage in deeper learning in the face-to-face workshops, eg. searching for material on their assessment topic, followed by application of reading and writing strategies using any relevant sources that they have found.

The laboratory practice and experimentation strand introduces students to the concept of a scientific hypothesis; they then have to formulate their own hypothesis, test it experimentally, analyse their data and write a report in the form of a scientific paper.

The data collection and analysis strand then gives students the opportunity to practice dietary data collection and handling with statistical methods.

## Assessment

The assessments are designed so that students can demonstrate their ability to apply the skills acquired across the module strands to a series of related research tasks:

- Literature skills handbook containing exercises on information searching and referencing (10% of module mark);
- Literature review essay on *Salt reduction in bread: implications for*



Many of the School's PGT students have never studied in the UK before, so FOOD5405M: *Professional Development for Employment and Research* module supports the particular needs of international students with varying levels of experience whilst also benefiting domestic PGTs.

*food quality or Salt reduction in bread: implications for consumers' health*, including references in appropriate format (20%);

- Laboratory report on salt analysis of different types of bread (30%);
- Data handling and statistics workbook (10%);
- Report of dietary salt consumption (20%); and
- Presentation of a relevant academic journal article (10%).

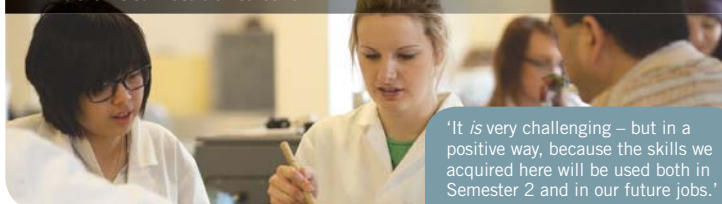
## Impact on students

The majority of students have demonstrated significant skills development over the course of the module, and this is echoed by students' own reflections in the end-of-semester skills audit. Academic colleagues in the School also recognise the positive impact on other modules in the PGT portfolio of programmes, particularly in terms of the quality of students' scientific writing both in examinations and research projects.

## Feedback

Student feedback for the module has been positive, with appreciation expressed for the range of skills that are covered, their relevance to research and future employability, and the focus on practical scientific methods. Students also value the module's blended-learning approach, which has helped to create a level playing field for a cohort with varied backgrounds and experience.

### What SFS&N students said



'It is very challenging – but in a positive way, because the skills we acquired here will be used both in Semester 2 and in our future jobs.'  
(2013/14 student feedback)

## Further information

More information on how Skills@Library can support teaching staff in developing the academic skills of their students is available from <http://library.leeds.ac.uk/skills>

Our lecturer pages provide a range of teaching materials on academic skills topics, including a suite of online resources that can be embedded in the VLE or used as part of your teaching. Visit <http://library.leeds.ac.uk/skills-lecturers>





## Leader column

Vivien Jones, Pro-Vice-Chancellor for Student Education

### A strategy for the future

As I write, a draft of our new institutional strategy is about to come to Senate, inaugurating a conversation across the University about priorities for action over the next five years. The language of the new strategy very deliberately echoes that of the University's original charter, connecting the future with our history and traditions and making them new for the twenty-first century. As the University's motto *Et augebitur scientia* reminds us, our responsibility is the increase of knowledge – through our research, and through our students. The indissoluble connection between the two, so central to the current University strategy, is also at the heart of our renewed thinking about student education.

In his contribution to the last issue of the Student Education Bulletin, recording his first impressions following this year's vibrant Student Education Conference, the Vice-Chancellor made clear that he is delighted with the progress we have made. Indeed, he sees student education as 'one of the real strengths – arguably the greatest strength – of the University'.

This is a great basis on which to move forward as we take the opportunity to refocus our priorities. Working within the Partnership, we have established three strong platforms on which to build: the Leeds Curriculum; LeedsforLife; and the integrated Student Education Service. The shared objective of all three is to ensure that our students have an outstanding all-round education that prepares them to be global citizens, capable of making a difference in whatever career or field they choose.

As always, there were plenty of great examples in this year's Celebrate Week, during which I had the privilege of attending many of the events. The LeedsforLife Citizenship Awards celebrated our student volunteers. Whether in schools, on projects abroad, or working with organisations in the third sector, they are both gaining and disseminating knowledge, providing role models, using their specialist skills, and learning to deal with unfamiliar circumstances. This is particularly true for our Intercultural Ambassadors, whose collaborative projects involving students from all over the world were showcased at a fantastic student-led event during the week. And at the RAG Community Fund Awards, student fund-raisers gathered to hear about the huge difference their contributions make to small local charities.

So how do we best build on this strong and successful foundation in our new strategy? In short, by thinking flexibly and enabling innovative ideas to flourish. The examples that follow are very far from exhaustive, but they give a flavour.

We must take the next step in our commitment to a holistic education, seizing opportunities to break down the divide between curricular and co-curricular activities. There are already some wonderful examples around. Our *Students into Schools* modules is one such, extending co-curricular volunteering in schools into the curriculum. No fewer than 17 disciplines now offer students a credit-bearing opportunity to teach their subject in local schools, and there are plans for similar modules for other volunteering activities. Conversely, following discussions at Taught Student Internationalisation Group, plans are afoot to maximise the impact for students of our excellence in foreign language teaching, where the chance to learn a new language could be made less intimidating by being non-credit-bearing and available outside normal teaching hours.

We must also push on with the internationalisation of the student experience. This can happen in all kinds of ways: by setting challenging targets for the numbers of students undertaking study or work abroad, for example; by flexible curriculum design that allows for international placements of various lengths of time; by enabling online international interactions between students; through productive partnerships with international alumni; and through the effective integration of home and international students on campus.

Change and new thinking depend on investment and high quality support. We need to establish sustainable, integrated support for digital learning; and we must continue to work on ensuring that our Student Education Service is the best in the sector (a goal much helped by the recent appointment of our three Directors). I also want to see investment in an Education Innovation Hub, which will provide academic colleagues with the space in which to create new programmes and innovative pedagogic approaches.

So, there's a lot still to do, but if we get things right within the new strategy our distinctive integration of the curricular and co-curricular will work to produce excellent students, ready to become the global citizens of the future.

## Student perspectives

Alice Smart, LUU Education Officer, and Charlotte Warner, LUU Welfare Officer



**Alice Smart, Leeds University Union Education Officer**

Leeds University Union is currently undertaking a process of strategic planning. One of the emerging themes from last year's Express Yourself survey is helping students to get value from the University. As part of this theme we're developing ideas around how best we can represent students on academic issues. We've been looking at how we can better support our Course Reps and how we can improve Better University Forum, which is the democratic forum where students vote on ideas to improve the University.

We were pleased to hear that the University pay dispute has come to an end. The marking boycott had the potential to seriously damage

students' academic progression so we're very glad we won't be seeing this type of action take place this year. Over the past few months, I've been working with TSEB on a University-wide policy on cancelled contact time. Until now we didn't have a policy that outlined the expectation of staff to reschedule any cancelled teaching events to avoid negatively impact on students' courses.

We're currently very busy interviewing undergraduate students who have put themselves forward to be School Reps next year. This year, we've received more applications than ever before and the standard of applicants has been incredibly high. It's been particularly great to see so many of this year's Course Reps putting themselves forward for School Rep. We're confident that we'll have a great team working in partnership across the University next year. We'll be recruiting our PGT School Reps in Semester 1 of 2014/15.



**Charlotte Warner, Leeds University Union Welfare Officer**

There are many different issues facing PGT students during their time at the University of Leeds and LUU always gives tailored advice for those specific issues. Many PGT students aren't funded and so may have to juggle part-time work with their studies. PGTs can take advantage of LUU's Joblink service, which advertises part-time work to all students. The Student Advice Centre also offers financial advice to students, helping with budgeting and other issues they may have. The University's widening participation work also encourages students to consider PG study at Leeds and can help students with finances.

The Student Advice Centre can also help PGT students with housing issues, as the PGT academic session doesn't always slot neatly into the housing contract cycle. Contracts can be checked in the advice centre to ensure students are signing up to a house that works well for them. There can also be issues for PGTs living in University Halls as a great many undergraduates may also be allocated the same residences, so it may not be a suitable PGT environment. The renovation of St Mark's has attracted a lot of PGTs and now has a really peaceful feel, with the added bonus of study rooms in the building. The Hall Exec at St Mark's have been brilliant this year and put on great events that are inclusive to all students living there. The Exec also took part in a house hunting campaign that encouraged students not to rush in to signing up for a house too early in the year as there are over 5000 empty bed spaces left every year. The campaign also encouraged students to get their contracts checked in the Student Advice Centre.

Mental health is a very important issue within the student population, with the numbers of students experiencing problems on the increase. This year, Leeds University Union and the University of Leeds have worked in partnership to create an action plan with the charity Time to Change, which ensures that both students and staff are fully supported. On Friday 16 May, Robert Partridge (Director of Student



Relaxing in the newly renovated St Mark's Accommodation – the peaceful atmosphere in these residences makes it an ideal choice for PGTs

Opportunity) and I signed the pledge that commits us to this.

In the week running up to the pledge being signed, a variety of events were organised to help students de-stress and relax while they revised. These included a film showing, gardening sessions, yoga and meditation. Members of the Mind Matters Society spoke about their personal experiences of mental health. Talks were also delivered that gave students the chance to learn how they can support peers with mental-health issues.

One such event was *Drop a Brain Size*, which was delivered by a student called Harriet. The talk outlined Harriet's experience of suffering and recovering from anorexia nervosa. She explained that, while the effects on her body of her disease may have been the most obviously visible, the most shocking were actually those on her brain. Now recovered, Harriet is delighted that she has regained her capacity for academic work as well as her health.

Throughout all of these talks, the peer-led support groups run by students were promoted: Re-think, a mental-health support group, and Student Minds, an eating disorder support group, run throughout term-time and are a safe space for students to talk about any mental-health worries they might have. They also act as a support network for students on NHS waiting lists or who haven't yet felt ready to seek other types of support.

To find out more, visit LUU's website at [www.leedsuniversityunion.org.uk/helpandadvice/healthandwellbeing](http://www.leedsuniversityunion.org.uk/helpandadvice/healthandwellbeing)



# Helping students in Leeds drink responsibly

Chloe Edwards, Alcohol Harm Reduction Project Co-ordinator

The Alcohol Harm Reduction project currently being run from Leeds University focuses on reducing the harms associated with excessive alcohol consumption within the Leeds student population. The project directly works on implementing strategies to reduce this harm primarily within University of Leeds, Leeds Metropolitan University and Leeds Trinity University. The project is funded by Leeds West CCG.

A research stage was conducted in the early phases of the project to decipher where there were gaps for improvements to be made throughout the city.

The outcomes of this research were determined through comparisons of previously run and current projects in operation across other universities, both nationally and internationally, by talking to students at each institution and from discussions with professionals working at the universities as well as those from other professions. The four categories identified were: licensing, night safety, sports clubs and education. Each of these areas plays a role in university drinking culture and each has gaps which can lead to unnecessary problems occurring.

Following this, an action plan was produced targeting individual aspects of each one, approved by the project steering group, and implemented into the universities.

The findings and proposed actions within the licensing category were highlighted as important, however, it was decided that this would not be an area which could be significantly addressed through this project. The steering group agreed it would be more beneficial to get involved in a co-production group which aims to introduce a voluntary responsible retailing scheme throughout Leeds and over time to lobby for a minimum pricing system similar to that currently operating in Ipswich.

The LUU bars and venues team were also approached to work towards the Best Bar None award. As a result, the three bars within the venue have been awarded Gold Award status. The scheme rewards responsible retailing and this is the first time all three bars have received this recognition simultaneously.

Night safety is an extremely important aspect of harm reduction. After a recent surge in the number of incidents occurring within the student population, the importance of increased night safety and awareness has been highlighted within the university community. As there are a number of initiatives already in place to aid the student population in this area, it is a matter of looking at why people are not using them and the publicity behind these projects.

In order to target this, focus has been directed towards getting home safely and supporting the Knowledge partnership in their Safe Spaces scheme. Areas which have been addressed include promoting the use of taxi services and the LUU Nightbus.

Each academic year sees a number of disciplinary processes

occurring as a result of inappropriate sport socials. With 91 sports clubs across UoL, LMU and LTU, a number of students are involved in university-level sport and in turn their club social activities.

Whilst it must be recognised that a number of these members do not drink as excessively as the common perception of the student sport culture may suggest, the ambience surrounding Wednesday night sport socials is one that paves the way to some of the more disturbing aspects of the student lifestyle, displaying a significant disregard to the harmful effects of excessive alcohol consumption that may affect their members.

This area of the project focuses on Social Guidelines followed by university clubs, providing specialised alcohol awareness courses for social secretaries, and producing an online training tool/ induction quiz to ensure committee members are provided with the information required to look after their members on socials.

It was apparent from research results and focus groups with students, that there is a lack of awareness of the dangers of excessive alcohol consumption as well as a happiness in disregarding them. It is of utmost importance to outline the effects that could be caused by these behaviours. Alongside the education and health implications it is also important to highlight the implications on university life (disciplinary procedures, attendance, criminal records, etc).

Reports on drinking habits suggest that those who are aware of the guidelines dismiss the implications as they continue to drink at hazardous and harmful levels.

There are a number of areas to target within education. This project focuses on developing online tools (similar to the aforementioned tool for sports clubs whereby students are provided with a range of information to help them whilst in Leeds, from drinking guidelines to taxi services, sexual health and drink driving information).

A marketing campaign is being developed that will launch at the Leeds Summer Ball (UoL) in June and reprise in Fresher's Week 2014 across all three higher education institutions. The campaign will provide students with opportunities for peer-to-peer advertising and education.

Communicating directly with students during Healthy Week and Alcohol Awareness Week has also provided opportunities to directly communicate with students regarding these matters.

In May, a paper about the project was delivered at the Primary Care and Public Health Conference. The author has also been invited to sit on the advisory board of an NUS project funded by the Home Office that aims to introduce a responsible retailing kitemark system into various universities across England.

Those involved in the project are hopeful that funding will be renewed for the next academic year so that this work can continue to target students and their drinking behaviours.

# PGTs – they're a bit different, aren't they?

## Tales from around the University

With only twelve months of study in which to fully assimilate themselves into the culture of the University (and very often the culture of the United Kingdom also) as well as into their programmes, taught postgraduate students have to make the quickest transition to Leeds of all our students. As such, they have very different support requirements from postgraduate research or undergraduate students. Here we explore some of the PGT-specific support on offer from faculties and services around the University. With the announcement that PGTs will soon have access to Leeds*for*Life (see SEB11, SOE update, p.9), the existing offering looks set to improve for this important sector of the student body.

### Specialist support for PGTs

Nicola Scothern, International Student Office

Here at the International Student Office we provide a range of support services and opportunities for international PGTs to help them make the most of their time at Leeds. We offer specialist advice and guidance, from the point of offer right through to graduation and beyond.

We produce publications specifically targeted to international postgraduate students to help them prepare for coming to Leeds and weekly orientation sessions take place throughout the year. Our free immigration advice service is available to students before they arrive, and during their studies. Specialist immigration advisers in our team can answer questions about visa applications and advise on documents required at any stage of the process. For those students who need extra support we offer courses such as *Feeling at Home in Leeds*, which provides practical tools and techniques for cultural adjustment.

#### What PGT students said

A big thank you to the ISO team. Your guidance and support made my BRP process stress-free and easy. [Your] professionalism is beyond compare and the team spirit is superb. Keep up the good work!  
Kwame Frempong, MSc Actuarial Finance

Although it was very busy today [ISO staff] still helped me complete my work with patience. [They] were pleasant and efficient with every student when handling their cases. I admire ISO's service wholeheartedly.  
Deepa Ellepola, MA TESOL Teacher Education

Our team also facilitates Global Community, an initiative to inspire and support all students, and to help them get the most out of being at a multicultural university. A range of activities to meet people from around the world are on offer, including Global Café, a popular free café every Monday, and Global Saturday Trips around the UK. Our Intercultural Ambassador volunteer programme is very popular with postgraduate students, providing them with an opportunity to meet other students and work together to deliver an intercultural activity on campus.

#### Further information

To find out more about what we do, go to [www.internationalstudentsupport.leeds.ac.uk](http://www.internationalstudentsupport.leeds.ac.uk)

### Improving employability for PGTs

Marah Gardner, Careers Centre

The Careers Centre recognises the advantage that a Master's degree can give in entering the graduate workforce and supports PGT students in a variety of ways. Master's students use a

range of Careers Centre services including CV and interview advice, career planning and employer networking events (176 employer presentations and workshops and 9 fairs involving 366 organisations in 2013 – 2014). We can advise on employers that particularly value a higher degree, both in the UK and internationally, such as the World Bank Young Professionals and many science and engineering companies.

Some recent activities for master's students include:

- A Human Resources Management Employability Conference in January delivered in collaboration with the Business School and Careers Centre inputs on Assessment Centres, interviews and social media.
- A forthcoming drop-in advice session in the School of Sociology & Social Policy.
- Tailored sessions agreed with academic staff, such as an update on labour market information for MA Communications, Enterprise Skills for MA Music, and practical job-search techniques for the MA Performance and Cultural Industries.
- International Master's students use the Careers Centre services extensively and this year's series of regional employer networking events is proving popular with both undergraduate and postgraduate students from overseas. Events were also held in Japan in April and the Middle East in May.

We are aware that there can be barriers to accessing taught postgraduate study and subsequently, moving into the professions. We can support students as they decide to move into further study by providing the following:

- Objective guidance to enable students to assess all their postgraduate study options, including funding sources
- International Online information [http://careerweb.leeds.ac.uk/info/12/further\\_study](http://careerweb.leeds.ac.uk/info/12/further_study)
- Free literature and guides in the Careers Information Room
- Involvement in a HEFCE project led by Educational Engagement – this is aimed at improving access to taught postgraduate courses for students from a Widening Participation background and includes 60 bursaries of £10,000 here at Leeds
- Career consultant contributions to current PhD research into the motivations, influences, employability and coping mechanisms of Music students on Master's Degrees May.

### PGT support in Engineering

Dunan Borman, Civil Engineering

Our School's PGT tutor Kris Moodley has developed a strong network of current and graduate MSc Civil Engineering students. He has used Facebook groups for keeping alumni and current students in touch with one another, which has proven very successful. There is a strong international intake to these MSc programmes and Kris has worked closely with the International Office and made excellent use of their networks to visit international partner Universities and maintain relationships. Student word of mouth has been fostered via these good links and they act as a communications channel for students interested in studying in the School. Important in the Faculty of Engineering, both in term of supporting student projects, providing placements, but





Taught postgraduate students have very different academic and support requirements from their postgraduate research and undergraduate peers

also for ensuring students at Leeds get the best support. Links with industry have been important for ensuring that our MSc courses reflect industry need. For example the recent government support for the aerospace sector has meant that our strong links to the industry have enabled students studying at Leeds to be eligible for the Aerospace MSc Bursary Scheme, which covers fees for specific aerospace industry approved courses – at Leeds, these include MSc courses in Advanced Mechanical Engineering, Computational Fluid Dynamics, Electronic and Electrical Engineering. See [www.raeng.org.uk/education/aeromsc/programmes.htm](http://www.raeng.org.uk/education/aeromsc/programmes.htm)

## Getting PGTs work-ready at ESSL

Iyiola Solanke, School of Law

The *Academic and Professional Skills for Masters Students* module in the School of Law ran for the first time this academic year.

The response has been positive so it will run again in 2014/15 with an improved emphasis on employability. The module runs from week two to week ten, so even those international PGTs who arrive late are able to benefit from it. It runs alongside the taught academic programme and develops the academic and transferable skills students need to excel in their taught programmes as well as prepare for professional roles after graduation.

Feedback from students was excellent:

### What Law PGTs said

That all law students from different courses were involved gave us all an opportunity to interact. The module covered really diverse topics and we were able to meet key staff.

These modules provided a good insight into what is expected of me as an international student.

The Professional Graduate Interns scheme in the School of Law is essentially a scholarship that operates as an internship. Two PGT students were employed on fixed-term contracts for the year 2013/14. The two interns were asked to design and implement projects targeted to implementation of the School strategy. The School hopes to employ another two interns in 2014/15.

Feedback from both PGIs was incredibly positive:

I thoroughly enjoyed being part of the PGI scheme and have learnt so much. I have become more aware of my professional skills, been able to develop and improve on them, and gained a far better understanding of how to identify them when applying for jobs. Already I have received a job offer from a leading academic publisher who were very impressed by my work on the scheme. I feel that my time as a PGI has helped give me an edge in showing employers that I'm not just the average law student – I'm someone worth investing in.

Professional Graduate Intern, 2013/14

### Further information

To find out more about the Professional Graduate Intern scheme, go to [www.lssi.leeds.ac.uk/undergraduate-research-scholarship-scheme/](http://www.lssi.leeds.ac.uk/undergraduate-research-scholarship-scheme/)

## Enhancing our PGTs' employability

Elizabeth Bailey, LUBS

In LUBS our strategy is to provide discipline-specific and where possible personalised employability support to our taught postgraduate students. From induction and right the way through the 12-month PGT programme, we work closely with students, helping them improve their academic skills, ensuring they get the most from their programme of study and enhancing their professional skills so they can translate theory into practice and improve their career prospects after graduation.

To this end, we embed Professional Development Tutors (PDTs) within each core masters programme. PDTs work closely with a range of partners, including professional, research and teaching colleagues, local and international businesses, alumni, the Careers Centre and the Language Centre to provide the most up-to-date employability advice and teaching possible.

Most PGTs in LUBS are international or EU, which presents a range of challenges and opportunities. Of these, most will be returning to their home countries after graduation and we aim to equip them with the skills, knowledge and behaviours to enable them to thrive in their home job market. Each student has different needs, including the smaller number of home students that we work with and our provision is as flexible as possible to meet these needs.

Our PDTs have a range of professional backgrounds themselves, all having worked extensively in industry prior to joining the team at LUBS. They operate strategically as a Hub, exchanging ideas and practices as well within their specialist programme teams.

The range of support we provide includes –

Full cohort credit-bearing teaching and assessment:

- Skills such as self awareness, reflective learning, goal setting, networking, giving and receiving feedback, leadership, teamwork, presentation skills, how to identify and articulate personal and professional skills effectively (eg. for a job application or CV).

Small group:

- According to need, optional extension activities for self-selecting student groups; this has included using group exercises for targeted personal review and development, interview role-plays, experiential learning games.

One to one:

- CV development, supporting job applications, interview advice and practice, academic skills, personal coaching.

### Research and innovation

In order to improve international employability, representatives from the Hub travelled to China and India recently to meet local businesses and recruiters. We have also recruited a Chinese student intern with HRM experience for a semester to utilise her language skills and local market knowledge to both research and write a guide for current and future Chinese students. This was a mutually beneficial experience as Yirwan explains:

My job was to collect useful information about the Chinese employment market and write a guide. It was a fantastic internship experience. I also got the chance to go to IE Business School in Spain as an exchange student. I think this internship will prove to employers I have good communication skills, executive ability and good time management.

Yiran Wang, Msc International Business 2013/14

We intend to repeat the exercise with an intern from another country next academic year.

# The ethically aware Leeds graduate

## Embedding an understanding of ethical issues and the ability to address these within our curricula

Dave Lewis (School of Biomedical Sciences), Megan Kime (IDEA CETL) and Janet Holt (School of Healthcare)

The University views an education in ethics and training in ethical thinking as an essential element of all its degree programmes. *Ethics and Responsibility* is one of the three core programme threads and it requires students to be provided with opportunities to engage with the ethical issues within their individual disciplines. Ethical awareness is a key attribute of a Leeds graduate, setting them apart from graduates from other HEIs. Critical to this process is not only the provision of knowledge of individual ethical issues, but also opportunities for students to consider viewpoints other than their own and engage in intellectual debate. Here we report on three initiatives at Leeds that seek to provide this education.

Dave Lewis (School of Biomedical Sciences) is responsible for the development and delivery of ethics teaching across the Faculty of Biological Sciences. Students are introduced to both generic (eg. role and responsibilities of a scientist; research ethics and governance) and specific (use of human participants and informed consent; animal experimentation; gene doping) ethical issues throughout the three years of their programme. Interactive teaching methods (eg. role play; debates; case studies; audience response handsets) are utilised to engage students, promote discussion and enable them to consider alternative viewpoints in a supportive, non-confrontation environment.

### What FBS students said

[The] most constructive seminar I have attended to date. I gained a lot from it [and was] impressed by the contributions from my fellow students and their willingness to discuss the issues.

[Studying ethics as part of my course has given me] the opportunity to put the “why” back into the course.

Individual workshops are integrated within existing modules rather than within stand-alone ethics modules. In Biomedical Sciences, students also have the opportunity to create and deliver interactive ethics workshops in local secondary schools as their final-year research project. At the end of their studies, students are required to demonstrate an increased ethical awareness by applying this training to their research. They have to reflect upon and evaluate the research governance, ethical issues and societal impact of their final-year research project and include these reflections in their dissertations.

Staff from Inter-Disciplinary Ethics Applied (IDEA) work in partnership with academic staff to teach inter-disciplinary ethics within programmes of study. Founded in 2005 with the award of Centre for Excellence in Teaching and Learning (CETL) status by the Higher Education Funding Council for England (HEFCE), we have since developed ethics teaching across numerous modules in several disciplines within the University, including:

- Business
- Computing
- Dentistry
- Engineering
- Environment
- Media & Communications
- Nanotechnology
- Geography

At the heart of our approach is ensuring that the study of ethics is properly contextualised within host disciplines. Teaching is often delivered by an ethicist and a subject expert in partnership. We strive to ensure that ethics is properly embedded within

the curriculum so students can see the relevance of it to their discipline – and also to their personal and professional lives. Much of our teaching draws on real-life case studies drawn from the relevant discipline. Where possible we include ethics at all levels of the curriculum so students can build on their learning year on year. Comprised of ethicists, subject practitioners and student representatives, Ethics Theme Teams provide the means through which we work in partnership to develop, embed, and continually improve our ethics teaching in each discipline area. Ethics Theme Teams join up all the elements of ethics taught in the relevant discipline so as to provide a coherent thread running through each programme of study.

In the School of Healthcare, ethics is an important part of all programmes that prepare students to become healthcare professionals or social workers, or contribute to the continuing professional education of registered practitioners. The content for ethics and law is contextualised to meet the needs of the specific professions and mapped to Professional, Statutory and Regulatory Body standards and competency frameworks. For some programmes, ethics is integrated into practice-focused modules throughout the three years, while some have a mixture of integrated content and specific modules. For example, students on nursing programmes are introduced to essential information about ethical practice such as confidentiality and informed consent in preparation for first-year clinical placements. A compulsory Year Two module on healthcare ethics and law allows students to develop critical thinking skills in the exploration of the meaning of ethical practice as well as some of the ethical issues that arise in contemporary healthcare such as assisted dying and allocation of health resources. Building on the knowledge and skills developed in the second year, ethics in the third year is integrated into Theory Practice modules.

The Healthcare Ethics and Law subject co-ordinator oversees the planning and delivery of all ethics teaching and assessment in the School and leads a team of lecturers who are all registered practitioners with specific knowledge and qualifications in ethics. The team uses a blended-learning approach and face-to-face sessions are complemented by a series of online learning packages. Through use of real cases and interactive teaching methods, we are able to ensure meaningful integration of theory and practice. The team receives consistently good feedback:

### What SHC students said

The content provided active group discussion and allowed exploration of personal and group opinions regarding tough subjects. [It was] stimulating, interesting and related well to practice.

The best bits of this module were the online resources and tutorials on the VLE. I felt that a large amount of effort and time had been put into creating them to support my learning.



## PGT: what the figures tell us

Peter Coles, Strategy and Planning

### How many

The University of Leeds has a total of 30,761 students from over 140 countries registered to study here during the academic year 2013/14. Of that number 5,112 are taught postgraduate students, which equates to 17% of the institution's total student population.

### How they study

Almost two-thirds of our PGT students undertake full-time programmes of study – a total of 3,113 or 61%; while 1,991 or 39% enrol on part-time programmes. At undergraduate level, the picture is completely different with only 3% currently engaging in part-time study. However, a similar pattern emerges with our PGR students where 47% are registered as studying part time.

### Where they study

The table below shows which faculties our PGT students are currently studying in:

Faculty	PGR	PGT	UG
Arts	284	334	4455
PVAC	135	352	2307
Business	87	1280	1513
ESSL	216	843	2343
Biological Sciences	197	72	1952
Environment	233	405	1242
MaPS	238	101	1996
Engineering	475	305	2265
Medicine & Health	338	1221	4181
International Foundation Year			188
Lifelong Learning Centre			423
SDDU*		199	

\* Where SDDU staff are on learning and teaching in HE programmes

### Where from

Domestic students comprise nearly half of the PGT student body, with 2,499 UK PGT students currently registered. They are joined by 387 students from the EU and 2,226 students from outside Europe. The figures show that a total of 51% of our PGT students join us from outside the UK compared with 13% of our UG students and 46% of our PGR students.

### Which countries

Country	PGTs	Country	PGTs
China	912	USA	69
India	206	Malaysia	67
Nigeria	160	Germany	66
Thailand	117	Greece	49
Taiwan	100	Japan	44

### Who they are

The current PGT cohort consists of 3,184 female students and 1,928 male students – that is a total of 62% female, compared with 60% for UGs and only 18% for PGRs.

### And next year?

We received 34,165 applications for PGT courses for 2013/14. Applications for 2014/15 are up 14% on this point last year we estimate that we will receive around 39,000 applications by September 2014, which will beat the existing record (for 2013/14) significantly.

## SOE update

David Gardner, Student Opportunity & Enhancement

### Student Opportunity and Enhancement team

The Volunteering team and the LeedsforLife team are now Student Opportunity and Enhancement.

Visit us at [www.leeds.ac.uk/soe/index.html](http://www.leeds.ac.uk/soe/index.html)

### LeedsforLife – supporting PGT students

Consultation is underway to identify enhancements to the Leeds for Life website to provide support tailored to the needs of PGT students. So far, ideas with broad application include a skills audit (based on faculty/school-determined skills requirements), an introduction to LfL with case studies focussing on benefits to PGT students, revised personal tutoring webforms (where necessary tailored to the needs of schools with very specific needs), recording co-curricular activities (the HEAR does not cover PGT) and identifying skills development opportunities and LfL Foundation funding for PGT students. These ideas and others will be considered by the LfL Board, with a view to delivering new functionality for the 2015 academic year.

### LeedsforLife Foundation funding

This year 64 student-led skills-development projects have been supported through the funds provided by alumni, Footsteps fund and Santander Universities. Projects cover a diverse range of activities in UK and international settings, including: Leeds RAG Thailand Project; Raspberry Pi weather station; child nutrition in Vietnam; and empowering vulnerable women in Leeds.

### LeedsforLife Citizenship awards

Celebrate Week was an even greater success this year and we were especially pleased to welcome so many external guests, staff and students to the LfL Citizenship Awards. Those presenting awards included the Vice-Chancellor Sir Alan Langlands and West Yorkshire Police Chief Constable Mark Gilmore, who both praised the contributions our students make to the community through our volunteering programmes. Further details and a complete list of winners are available at [www.leedsuniversityunion.org.uk/celebrate/leedsforlife/](http://www.leedsuniversityunion.org.uk/celebrate/leedsforlife/)

### Updated PT policy

The LfL Board has agreed an updated policy on personal tutoring, which has been circulated via FLTCS. It can be found at [www.leeds.ac.uk/soe/soe-personal-tutoring.html](http://www.leeds.ac.uk/soe/soe-personal-tutoring.html)

### New LeedsforLife Ambassadors

Edward McAlone (Biological Sciences) and Claire Proctor (LUBS) will join current Ambassador, Linda Allinson (Arts), as LfL Ambassadors for 2014/15.



If you would find a student voice useful in promoting LfL to your colleagues or students, e-mail [lfamb@leeds.ac.uk](mailto:lfamb@leeds.ac.uk) to arrange for the Ambassadors to come and visit you.

### Further information

If you would like find out more about any of the above, simply e-mail [soe@leeds.ac.uk](mailto:soe@leeds.ac.uk)

# Mathematical modelling in MaPS and Engineering

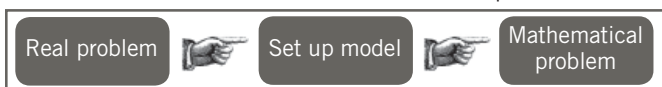
Mike Savage, School of Physics & Astronomy

This HE STEM project involves 13 STEM departments from eight Universities\* addressing a problem of increasing concern, namely how best to equip HE STEM students with the ability and confidence to solve real-world problems in physics, engineering, chemical kinetics, drug therapy, population dynamics, and a host of other fields, by setting up mathematical models and finding solutions to the mathematical problems that arise.

The significance of these skills has long been recognised in science and engineering and by the employers who recruit in these disciplines. Alan Stevens (Mathematics Modelling Group, Rolls-Royce) states that 'the ability to solve physical problems using mathematical modelling and mathematics are invaluable attributes for new graduates entering an engineering industry.'

## What *is* mathematical modelling and what is involved?

Once a real problem is formulated, modelling begins by 'setting up a model' of the real world that is relevant to that problem:



Setting up a model of the real world generally involves:

- Making assumptions
- Drawing a diagram (visualising the problem)
- Introducing variables
- Applying a law or principle

The function of the model is to transform the *real* problem into a *mathematical* problem. The ability to set up a model of the real world is a high-level skill and it will take time for students to gain enough experience through practice to meet the requirements of their degree. However, once it has been acquired, this skill gives students both a strategy for and confidence to:

- tackle 'unseen problems'; and
- perform full modelling investigations using a multi-stage modelling cycle as illustrated below.

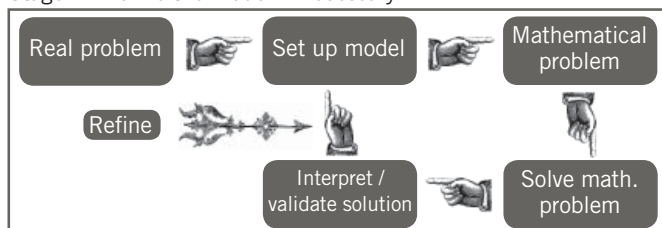
## Modelling investigations

Stage 1 – set up a model

Stage 2 – solve the mathematical problem

Stage 3 – interpret and validate the solution

Stage 4 – refine the model if necessary!



## What our Leeds project partners are doing

The approach adopted by Chemistry, Mathematics, Physics & Astronomy, and Civil, Electrical and Mechanical Engineering as part of the National STEM programme has involved introducing modelling skills and multi-stage modelling into the undergraduate curriculum for those students who need them in ways that are most suitable to their needs.

Approaches range from a new modelling and problem-solving module in Physics, to active learning-based project work in Mechanical Engineering – including groups of students competing to design, build and test remotely operated buggies, energy-generating water turbines and several other interdisciplinary

projects. In Civil Engineering, Duncan Borman is part of the team developing group-based modelling workshops around real-world problems. In discussing the approach, he explains:

"We get students excited by a real problem that they then model at increasing levels of complexity; it allows us to use the problem as a vehicle to introduce some relatively complex ideas that students will need elsewhere within their degree programme.

Modelling and problem solving skills were needed by Red Bull Stratos – the team who were responsible for the thorough mathematical and modelling investigations that preceded the record breaking skydive from 39km made by Felix Baumgartner in 2012. This has proved to be an interesting and rewarding problem for first-year undergraduates to investigate (model and solve), and most importantly there is experimental data for them to validate their models against.

This project has gone down well with both first-year civil engineers and physicists, and feedback has been enormously positive."

## Modelling investigation

How will the skydiver's speed vary with time and distance travelled as he falls from 39km through the different regions of the atmosphere?



## Broader context and national importance

*Problem Solving in the Workplace: Recent findings from research into the country's mathematical needs* (ACME, 2011) confirms that the ability to apply mathematics and communicate mathematical ideas are skills highly valued by employers. However, the research also suggests that these skills are often perceived as lacking in new undergraduates from STEM degree courses.

## Problem solving in HE – *is* there a problem?

To understand the transition from university to employment, it helps to review the transition from school or college to university.

Over the past 20 years, both A-Level Mathematics and A-Level Physics have undergone substantial curriculum change, such that sixth formers now experience far less problem-solving in both applied mathematics and physics than pre-2000. Specifically, A-Level Physics has become far less mathematical, with the problem-solving element of 'core physics' being substantially diminished. Within A-Level Mathematics, the applied-maths content has been reduced by 33%.

Consequently, many students now entering HE to study applied mathematics, physics or engineering have studied, at most, one module of Newtonian Mechanics. For example, at the University of Leeds, 46% of first-year physicists in 2012 had, at most, one module of mechanics on entry. Since Newtonian Mechanics has long been regarded as an ideal vehicle for developing students' 'modelling and problems skills' and, since two modules are

# Hands on the Future – a review

Jane O'Neill, SDDU

This year's Hands on the Future was opened by Neil Morris who delivered the keynote *Digital technologies and the future of learning and teaching in Higher Education* whilst making the first official recording on the University's new lecture-capture system (which will be made available soon).

Participants then spent the afternoon browsing stalls in the Parkinson Court and attending presentations focusing on the current strategic initiatives in technology for teaching and research.

There was excitement about the first viewing of the new lecture-capture system and Personal Capture software. Martin Callaghan demonstrated the new system by capturing content in the room, showing the editing processes and how it would finally appear once approved for release in the VLE.

Participants could also experiment with Personal Capture, which captures video, audio and screen content on a PC or laptop). Colleagues who recorded and edited their own content and then viewed the final output, reported that the software was far easier to use than some of the other technologies they had tried.

The University's new Academic Champions for Blended Learning

Alina Secara  
@gr52weet  
Exciting learning&teaching technology&demo of the new Leeds lecture capture system@#HOTF14 with #leedscts colleagues  
pic.twitter.com/l5piwp0CZE

(Left and below)  
Participants' tweets from the day

Chris Hassall @katatrepsis - May 12  
Great to hear about social media success from @LdsUrbPolls et al: >4700 Twitter followers, 80k blog views and global reach #hotf14



(Left) Getting to grips with the latest technologies at HOTF 2014



were out in force providing examples of a range of technologies being used in both student education and research. Together with Colleagues from the VLE team, the Digital Learning team, the Library, SDDU and Comms, they provided colleagues with the opportunity to experiment with tablets and mobile devices, augmented reality, browse iTunesU content, Open Educational Resources, audio and video recordings of teaching, eBooks, FutureLearn and BoB National.

For those who wanted to explore these technologies in more depth, 20-minute presentations were held throughout the event. These showcased inspirational success stories and examples of best practice in each of these areas.

If you missed Hands on the Future, you can find the same topics discussed and links to training events on our Changing Landscapes

website ([www.sdduonlineleeds.ac.uk/changinglandscape/](http://www.sdduonlineleeds.ac.uk/changinglandscape/))

Also, check out our popular Digital Dates

sessions – a programme of short, informal workshops to help us to develop digital skills to support all aspects of our lives at the University. See [www.sddu.leeds.ac.uk/sddu-digital-dates.html](http://www.sddu.leeds.ac.uk/sddu-digital-dates.html)

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## Mathematical modelling – continued

generally considered necessary for students to meet sufficient content at A-Level and also gain sufficient practice in problem solving, it is not surprising that HE is now faced with the task of equipping many new STEM undergraduates with the basic modelling and problem-solving skills that they need. While the optimal solution will involve changes to the pre-university curriculum; until that happens, it is imperative for STEM departments in universities to introduce initiatives that will equip students with the skills that they need in order to progress within their undergraduate degree programmes.

### Outputs and outreach

The eight project partners have organised a variety of events to share and evaluate results, including the National HE STEM Conference and other national and local events. Some of the developed resources from partners are being released as OERs via Jorum. At Leeds, as well as being used in their respective schools, some of the resources will be used as part of a new *Exploring the Sciences* Discovery Themes module, that will be offered next year on Contemporary Science debates. Resources are also being used to support outreach with an annual modelling event held at the University by Engineering and Physics for A-level students who want to get an insight into how scientists and engineers use mathematics and modelling.

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## News and updates

### New support for PGTs

The summer months may be a time of replenishment for many who work and study at the University, but for PGTs it is often the most stressful part of the year, which is reflected in their increased use of the **Student Counselling Centre** during this time of the year.

In July and August, many are writing dissertations or a report on their major research project. This vulnerable time occurs when familiar academic and support staff may be on leave and there may be fewer peers around to confide in or socialise with.

This year, the Student Counselling Centre will offer a half-day support session based on the very popular *Dr Who?* events that PGRs have been offered for a number of years. This session will provide an opportunity for PGTs to meet with peers in a supportive environment where they can consider ways of maintaining motivation, overcoming procrastination and managing stress.

The session will take place on **Thursday 3 July 2014** from 9.30am to 12.30pm in the Parkinson Building. Students wishing to book a place should e-mail [k.j.donnely@adm.leeds.ac.uk](mailto:k.j.donnely@adm.leeds.ac.uk) or go to <http://bit.ly/14VrqNf>

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## The Leeds Graduate – the distinctive journey

SEC4: The Fourth Annual Student Education Conference

Thursday 8 and Friday 9 January 2015

### Who is the Leeds Graduate and what makes their journey distinctive?

SEC4 will describe the journey that students make as they transition to, within and from University, and explore the way the University of Leeds engages with and participates in these crucial phases of the student experience. Over the course of one-and-a-half days, speakers and panellists will include heads from schools, colleges and academies explaining how they prepare their pupils for university, together with employers and alumni who will discuss the way the University of Leeds can help our students become the distinctive graduates widely sought by professional and civic organisations around the world.

### SEC4 programme

In response to delegate feedback, the SEC programme has been extended to one-and-a-half days.

Day one starts in the afternoon with a panel discussion, exhibitors delivering 'lightning' presentations and an opportunity for delegates to network in the Exhibition Area, visit stands and enjoy refreshments. A Conference dinner closes the day.

Day two comprises a full day with an opening keynote address, one 30-minute set of Parallel Sessions, one set of 90-minute Symposia, one set of 60-minute Workshops, a closing panel discussion, and access during all programme breaks to the Exhibition Area.

### Keynote and panellists

**Thursday afternoon panel discussion** – school heads discuss the impact of A-level reform on their pupils and what these reforms might mean for universities as their pupils become our students.

**Friday morning keynote** – we are delighted that Leeds alumnus and visiting professor Dan Crow will deliver the SEC4 keynote. Dan will reflect on how his experience at Leeds helped shape a career that has so far included roles at Apple and Google, and outline what he now looks for as an employer of graduates at start-up enterprise Songkick.

**Friday afternoon panel discussion** – local and national employers and alumni discussing the qualities they look for in graduates and what makes Leeds graduates distinctive.

### Participating in SEC4

**Symposia** – we are inviting submissions for six symposia demonstrating innovation and good practice in: Transition to the University; Transitions within the University; Graduate transition; Work-related learning; and My distinctive student experience (SEC's first student-led symposium).

We encourage all symposia to demonstrate a range of approaches to supporting our students, ie. how blended learning is integrated to support transitions, how students support one another, etc.

Each Symposium lasts for 90 minutes and comprises a maximum of six 10-minute mini-presentations, followed by questions and answers. Want to deliver or be part of another Symposium that relates to *The distinctive journey*? Tell us on the SEC4 pro forma and we will consider it.

**Parallel Sessions** – lasting 30 minutes, sessions should include some interactivity and time for questions and answers.

**Workshops** – these 60-minute sessions are highly interactive and may include group work or role play so delegates may engage fully.

**Exhibition Area** – let colleagues know about a project in its early stages in a more informal setting, including a 60-second 'lightning presentation' and structured programme time on day one, and access to delegates during programme breaks and registration on day two. The Exhibition Area is an ideal space in which to network and inform.

**Parallel Session, Workshop and Exhibition Area** submissions can cover any aspect of student education that highlights innovation or good practice. **Symposia** should tie in with the main SEC4 theme *The Leeds Graduate – the distinctive journey*.

### Submitting your abstract for SEC4

To be considered for SEC4, download the abstract pro forma from the SEC website at [www.leeds.ac.uk/soe/conference/index.html](http://www.leeds.ac.uk/soe/conference/index.html)


Completed pro formas should be sent to Stephanie Stones on [s.e.stones@adm.leeds.ac.uk](mailto:s.e.stones@adm.leeds.ac.uk) and must be received by **1 July 2014**.

Submissions are considered by a refereeing panel. Authors may also be invited to publish in the Student Education Bulletin.

### Further SEC4 information

To download the abstract pro forma and for the latest SEC4 information, including the Conference programme, go to [www.leeds.ac.uk/soe/conference/index.html](http://www.leeds.ac.uk/soe/conference/index.html)

### Follow us

 UOLStudentEducationConference

 @SECLeeds #SEC4

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