A doctoral programme makes an important contribution to frontier knowledge in a specific discipline. However, the experience a doctoral research student gains whilst undertaking that research should be sufficiently broad to prepare them for today’s ‘knowledge economy’. Consequently our Doctoral programmes train researchers in a range of high level skills that are not constrained by the research discipline and are not exclusively designed for a career in academia but are transferable to other types of careers such as in the public, charitable and private sectors. The most important skills needed for future employment are the ability to anticipate and explore questions in applied research, in policy making and in leadership roles, no matter what the discipline and the modern doctorate should, therefore, include exposure to interdisciplinary research. To help prepare our doctoral researchers for various career options, the University ensures there is a range of opportunities for skills training available through the Doctoral Development Programme. The Training Needs Analysis (TNA) allows doctoral students to identify the training that is most appropriate to themselves, taking into account their prior experience, current research plans and general areas of interest. Many departments are now aligning their TNA to the Researcher Development Framework (RDF), which is a national tool that facilitates identification of areas of training and development need right from the first steps as a doctoral student through to later employment. This issue of the Doctoral Times is focussed on training and development and I hope you find it interesting and useful.

Professor Ian Douglas
Director of the Doctoral Academy
I remember as a young postdoc sitting in a meeting listening to the plenary speaker, the leading world authority in the area, and a question popped into my mind. For the remainder of the talk, I agonised – Should I ask this god-like being a question? In the end I decided - No. I must have missed something. It must be a bad question. So as the applause died down, the second greatest authority in the world in that field stood up and introduced herself at the microphone …… and asked my question, to which the response was “You know that is a really great question. I hadn’t thought of that. We will do that experiment and I will tell you next time”

Since then I have always tried to summon up the courage to ask the question in my mind. With time, and having now chaired many scientific meeting sessions, I have come to realise that this is an essential skill for researchers. Ask the question. Sometimes it won’t be the one everyone also wanted to ask but were too scared to. But sometimes it will. If people at the meeting get used to hearing you say your name and the University of Sheffield as your institution, they start to realise that here is a young person with knowledge, enthusiasm and interest in an area.

Often people you don’t know will see you after the session, introduce themselves, and talk to you. Before you know it, you will be asked to chair a session, perhaps with a bigger name in the field. The opportunities and benefits you get from this sort of networking are incalculable. Soon you are on first name terms with other established people in the field. You can ask them for advice and collaborations. You may get job offers, or invitations to speak.

And all from asking questions. Don’t expect not to be nervous. But try it.
Doctoral Academy Skills Training:

Laura Dixon, doctoral researcher in the Department of Molecular Biology and Biotechnology.

When I first signed up to attend SUGS I was a little apprehensive as to whether it was going to be an effective way of spending three days. Three days is a lot of time for a research student, which could have been spent researching in the lab. However, once I was there my scepticism faded away and I realised it was going to be an extremely useful experience! There is a range of skills to be gained from SUGS, which are really useful for the CV.

One of the most useful parts of the course is about interviews. Prior to attending SUGS, everybody has to write a CV tailored towards a specific job, which you can select from a provided list or select your own. You are provided with the opportunity to prepare for an interview and then be interviewed by other members of your team. The team and your mentor then provided constructive criticism about how you performed. They will tell you what you did well, how your body language was and what you could do to improve your performance. You are often not provided with such detailed feedback after interviews, so it was really useful to hear. For me it highlighted my overuse of ‘umm’ and ‘kind of’. In addition to this the sessions really helped me build confidence in the skills I do possess and to believe in myself. Since SUGS I have attended an interview for a postgraduate internship. The SUGS handbook and comments I had jotted down were invaluable in helping me to prepare.

The most unexpected way that SUGS has helped me is in making connections among the postgraduate community, which has directly impacted my research. During one of the gaps between sessions, I began discussing my research with a fellow member of my team who was from a different department to mine. I mentioned some issues I was having with visualising and quantifying results from a certain technique I had been using. At this point he exclaimed that over in the Med School there is a machine that I had not heard of, which could potentially help with my troubles. We exchanged email addresses and after SUGS he emailed me with more information on the machine and a brief protocol. I am currently preparing some samples and I hope to make use of the equipment and my new contact over in the Medical school.

I would recommend signing up for SUGS to anybody doing a PhD – you never know what you might get out of it!
Emma Green, doctoral researcher in the Department of Archaeology.

I do this to myself all the time. I eagerly put my name down to attend events aimed at developing my communication, team working and critical thinking skills. Then with trepidation actually attend them. I am not one of these confident, outgoing people who love to be surrounded by others and want nothing more than to be actively participating in ‘icebreakers’ and ‘group challenges’. Why then do you ask do I sign up for these events? To push my boundaries I reply and to take myself outside of my comfort zone. And this May at the Sheffield University GradSchool boy did I do that. So my heart sank as within the first few minutes we were placed in groups trying to use spaghetti, tape and string to get a marshmallow as far from the floor as we could. Add to that photographs were being taken we were going to have to engage in coaching and role play and I was in my own private hell.

It looked like things were going to go from bad to worse when we had to do group challenges. The first one entailed a shepherd herding sheep into a pen. We had to appoint a shepherd who with the aid of only a whistle had to get all of the ‘sheep’ (the other members of the group who were blindfolded) into the pen as fast as possible. The challenges did not get any easier either but they worked. We began to work together as a team, building on each other’s strengths. I finished the day on a high impressed with myself and how engaged I had been. This changed as day two progressed. The activity we had to undertake that morning took me far outside of my comfort zone and I could not see how it was of benefit to me. However on reflection, at SUGs they are really into reflecting. I probably learnt more about myself than I had the day before because of it.

At the end of the three days I realised my confidence in my ability to function as part of a team had increased. I could lead as well as support, vocalise my ideas and question others, give and receive feedback and most importantly enjoy myself whilst doing so (well most of the time). I now realise that I need to engage more with my fellow doctoral researchers as I can and do work well in a team. I intend to put this into practice as I organise the Society for Medieval Archaeology’s 2015 Student Colloquium. Whereas before SUGS I would have tried to go it alone and do it all myself, I now see that I need others to bring out the best in me, support my weaknesses and give me invaluable input.
I wish I had a more assertive, academic and confident learning style in which I would have actively engaged with my supervisors. I spent my first year learning about different types of literature, not knowing how to link things and generate something new. I had a continuous feeling of pressure and being examined throughout the first half of my PhD. I kept on trying to fulfill the confirmation review requirements. Thus, instead of flourishing on my own or exploring new things, I felt driven into things.

I wish I had taken the ELT6060 Speaking Skills for Research Purposes course at the beginning. That course was very helpful in learning about the process of PhD, speaking at the conferences, structuring one’s doctoral thesis and knowing about the potential viva questions. I must say that George Finlay Turner brilliantly conducted that course. He did not seem to miss out anything. I strongly recommend that course to all new PhD students.

Moreover, I wish I had known particular aspects of a more efficient literature review such as searching for the required terms, joining Researchgate to get access latest full text articles, and recording main things in a table, i.e. demographic characteristics of participants, research design, hypotheses, and research outcomes. In addition, I found Google Scholar easier to use for citing references instead of Endnotes or Mendeley. In hindsight, the time spent in learning and unlearning the various softwares could have been better utilized in working towards publications and presenting at conferences. I really benefitted from one such training event, which was about getting published. When I came to this university, I had no publication, but after attending that training event, now I have 13 publications in various forms such as magazine article, journal article, conference proceedings, conference papers, and poster publications on researchgate. Such things not only help build up your profile but are also relevant to a teaching/research career.

Nonetheless, one should also think about taking part in outreach activities, interdisciplinary research, and extracurricular activities relevant to one’s field alongside the PhD research work. I think that outreach activities not only aid in developing one’s CV, but would be useful in increasing the chances to obtain a future research grant or a better research position. For example, I started an educational development project in my home country as an outreach activity. I also presented at interdisciplinary conferences such as the Gothic conference at University of Sheffield and a culture conference at University of Birmingham. Moreover, as an extracurricular activity, I was selected as the student representative of University Research Ethics Committee. This post helped me gain more information about process of research ethics in universities. Thus, I would encourage all PhD students not to miss any opportunity that comes along. My motto in this context is “Now or Never”.

Saima Eman, doctoral researcher in the Department of Psychology
Assignments were checked and comprehensive feedback was given hence students could get personalised advice. I felt that the duration of the module, which took place for 2 hours per session per week was appropriate.

My final class finished in January 2015 when I was in the middle of my writing up. I applied my new found skills, especially when I had writer’s block. The assignment on reference mind mapping helped me to organise a literature search plan while discussions on how to present results guided me to write coherently and cohesively.

I submitted my thesis in June 2015 and the training I received significantly influenced my writing. As a lecturer candidate in my home country, Indonesia, I will be involved in teaching and supervising students. Attending ELT6050 was a great investment not only for my personal development but also for my future career. By offering this module and providing module materials in MOLE, The University of Sheffield has given their students an opportunity which influences both academic and professional progress. Thank you very much, UoS!
What is the RDF?
The RDF was developed by Vitae as “a tool for planning, promoting and supporting the personal, professional and career development of researchers”.

What’s it for?
In essence it’s a means of categorising the various skills and competencies that researchers develop over the course of their early research career. This can be used by researchers to plan their development and by institutions to organise their support for researcher development.

Does it work?
It has gained a great deal of currency due to its endorsement by the UK Research Councils (RCUK) and many higher education institutions and their doctoral researchers are using it more and more. It can certainly be a useful tool for analysing and describing one’s skills and given its standing with funding bodies it is likely that most researchers should be cognizant of it whether for their own development or when designing research training programmes for others. Further information about the RDF and how it can be adapted to your research can be found on our Researcher Portal.

Link here: http://www.sheffield.ac.uk/ris/ecr/training/planner

So I should use it then?
If it suits your purposes, certainly. Further information on the RDF can be found on the vitae website including their RDF planner which offers a subscription based service but the RDF itself can still be useful as a categorisation and organisational tool without the need to subscribe. From September 2015 the Doctoral Development Programme Portal will be redesigned to accommodate the RDF such that doctoral researchers using the RDF to support their development will be able to easily find training that they have identified they need.

1 https://www.vitae.ac.uk/
Researcher Development - The Right Keys

Less than a year ago when the subject “Request for PhD supervision” popped up on my email screen memories started crawling in. Many years ago I was the one who wrote such an e-mail and now I have achieved a position where I should provide guidance on how to develop and become a high profile researcher.

After opening the e-mail I accepted supervising a student throughout their research on the impact of governance on financial performance of state-owned enterprises. As an extremely critical issue for all economies seeking efficiency enhancement the student will employ econometric techniques (mainly panel data and cross section methods) to analyse data from international business database Amadeus. I knew that many doors are in front of them as are in front of every other PhD student and they all need the right keys to open them. So the main question is - which keys are the right ones?

In my opinion the first key is accumulation of knowledge about the area of your research. Read, read and read, stay in tune with new developments and participate in training. In addition, attend conferences, meet experts, discuss your research and provoke constructive criticism. SE Europe Research Centre (SEERC), the International Faculty and TUoS support our students in all these aspects of their research. Even though, my student is only six months into their PhD they have already attended two conferences, presented papers, got to know high profile UK experts and researchers in the area of corporate governance and furthered their research. It is all about students using their initiative and their supervisor will provide support.

Since research is not just about subject specific skills the second key is personal and career development. Students have to recognize their responsibility towards research, their colleagues and society, that research integrity cannot be compromised and that communication of results is essential.

The last and the most important key is part of one of the famous quotes of Albert Einstein. “Learn from yesterday, live for today, hope for tomorrow. The important thing is not to stop questioning.” So I have a question - are you ready to develop into high profile researcher? TUoS, SEERC and International Faculty use several tools which enable our students to become high profile researchers including doctoral centres, PGR training programmes and the Research Development Framework.

It is up to you to collect all the right keys.... they are waiting for you.

Dr Sotirios K. Bellos

International Faculty of the University of Sheffield - City College

“ It is up to you to collect all the right keys.... they are waiting for you. “
My research experience in industry helped me to join doctoral training in biomedical science. The training gave me an opportunity to further demonstrate my passion for research and I am immensely satisfied. I was privileged to introduce new systems for adult muscle stem cells. During early stages of the training, collaborations with other laboratories within and outside the university further enriched my confidence. I got to learn, relearn and reevaluate my own skills, ability to overcome many challenges. However, this gave me an opportunity to enjoy doing research and also to prepare myself for the next step. I was able to secure a post-doctoral position in the University of Cambridge before submitting my thesis and I am going to start my work in Cancer Research UK very soon. I strongly believe that doctoral training plays a role in developing your skills and also teaches you required skills to achieve your dream provided you identify them!

The first training activities that I found very useful were the academic external seminars, brainstorming internal seminars, symposiums and conferences. They never ceased to amaze me over and over again. Research is just stunning always! This was very important for me to keep my spirits high during tough times. Those were the platforms where I got a chance to listen, to present and get feedback on my own work.

As an international student the immediate training that attracted me was thesis writing course. I still remember the tutor and the discussions I had with other PhD students from different fields. The course was very useful for me and it made it a bit easier to write my thesis which is also a major part of the PhD!

I would advise current doctoral researchers to fully understand the training programme and choose the courses that you think will help you. I understand that when you are engaged in doing research at the bench or in the field, you may think that it may not be feasible to attend the courses. However, these courses are important as they teach you new skills and make you realize your own potential. Enjoy your research at the same time make sure you work on your skills that help you accomplish your dream!

I was very privileged to get a Sheffield University PhD studentship for my doctoral programme in Economics which took me a long way in my professional development as an independent researcher and academician. My three and half years at the department was an immensely opportune time for learning as it brought me regular involvement in activities such as seminars, teaching, supervisory meetings, technical courses, versatile professional development programmes and a wonderful cohort of other candidates to interact with. All these made me more effective in my research and helped my journey to come to a successful end in 2013.

Banking on this success, I am now working as an Associate Professor in Economics in one of my home universities. The broader range of skills that I was trained on helped me to develop both the depth and breadth of perspective necessary to serve as a teaching professional and provided me with a solid foundation in the skills that are mostly required for this. Here, I should also mention about my supervisors who generously helped to develop independent research skills, intellectual risk taking ability and inquisitiveness in me that are encouraging me to continue my current research, and transfer new knowledge to the scholarly communities which is what is required to achieve excellence in my profession.
Making the decision to get into a doctoral program and choosing a particular research topic is always challenging and a candidate’s motivation, aspiration and interest can only help him best to seek correct answers to these. Once a candidate decides to take up the challenge, I feel three things are most important to make his journey smoother and safer. These are, building and maintaining a friendly but admirable relationship with the supervisors, having a thorough training needs analysis with them to select the appropriate training course needed to overcome the identified weakness and lastly, having the perseverance to stick to the tasks as and whenever needed throughout the duration of the doctoral studies. While developing the doctoral thesis by anchoring in a rich research environment, the candidates must also take all the opportunities to develop professional and research networks from inside and outside the university to affirm their research ideas and findings and also to broaden the domain of their future career.

Trevor Calafato, School of Law Alumni

Starting a doctoral degree meant a drastic shift in the way I look at research and also a complete transition in my life and career. When I started the MPhil to progress for the PhD I was a probation officer and in the process I ended up as an Assistant Lecturer at the University of Malta, and after obtaining the PhD I was promoted to lecturer. After finishing reading the masters I decided to go for a bigger challenge, but I have to admit that I never thought it was going to be so tough. It was tough in the sense that I had to adapt my life in order to reach a higher academic standard and also to keep to the strict deadlines that I imposed on myself. In fact, though I was doing my PhD part-time I envisaged finishing my research in four years.

Since I am originally from Malta, this also resulted in an average of four or five trips to Sheffield every year until I submitted my work. During these trips to Sheffield I managed to meet other PhD students that were at different stages of their PhD. Meeting the other students helped a lot as we discussed each others’ research, got to know about the various issues one might encounter in the process, explored the potential research methods that could be used and adopted, and finally how to prepare for the viva, a crucial moment in the doctorate. This training was very useful and definitely helped me to be prepared for the worst possible outcomes. These experiences were so unique and topical that I started to share them with others that are undergoing their PhD studies.

Some of the training that I remember most was on how to prepare for the viva. During this training it was first discussed on what one should and should not say or do during the viva. Yet, things got more interesting when the last two PhD graduates of the Sociological Science Department shared their experiences with us. This was the most real and fresh first-hand experience I could get to before going for my viva. It is one, if not the most challenging moment of the whole PhD. It is like playing the roulette and you’re betting all your money. Yet, if you did your work well, you prepared for the various challenging questions that may be asked of you. It does not mean you will have all the possible answers but you need to show that you have thought about the different possibilities that might occur and consequently you can defend your research. This attitude helped to mature me personally and I definitely benefited from it professionally. As a full-time academic I have to deal with various situations where I need to defend my viewpoints with other professionals and consequently I have to be prepared. Being professional entails not only knowing your subject but also being able to justify your decisions as well as providing the most practical solutions.

The advice I can forward to all current doctoral researchers is that they should take advantage of the various training offered by their respective department and this includes participating in conferences. I know that in some cases training might look to be irrelevant to one’s research, there will always be something new to learn and possibly include in your current and/or future research. Being a doctoral researcher and eventually graduate shows your capability of researching and delivering high quality academic material.
Can you have the right conversations with your supervisors? Do you know how to talk about professional development with them?

Two-way dialogue is vital for the right training and development programme tailored for you. As a supervisor, we listen to clues from our doctoral students to work out how we can best support them. The best thing you can do is be open and honest with your supervisor, while being specific about a particular element of your doctoral training that concerns you. Supervisors really welcome hearing things like ‘I think I need some help with the public engagement side of my doctoral work’ or ‘I could do with some guidance on time management because I need to work to deadlines better’ because then we can guide you. Sometimes this means giving you the name of the right person to contact, sometimes that means setting up a dedicated meeting to discuss just that (and not the content of your thesis). We can point you in the right direction, but you need to be in the driving seat. Training and development is not just a tick-box exercise, it’s part of a broader thesis narrative. Keep a diary or blog to capture what it is you are learning about your development as a doctoral researcher. A three-paragraph blog structure of c.100 words per paragraph is really helpful (and doesn’t need to say anything about the data, analysis, or sensitive intellectual property of your thesis):

(1) Catch-all statement or question about a particular training/development aspect of being a PhD researcher that applies across all/most disciplines;

(2) Your particular example from that week / month (factual report of what training you did);

(3) What you learnt, including things you still need to do (reflective language).

Over the course of your doctoral study, you will garner a huge training and development resource that is not just useful to you (when you have to submit DDP reports) but also initiates better conversations with other researchers, whether PhD students or supervisors alike.

Research and Study Leave blog: https://helenabbott.wordpress.com/category/study-leave/
Let Serendipity Happen

Ideas, ingenuity, insight, invention, innovation... That is what doing a PhD is all about. Likely you arrived excited about THE problem, and perhaps it has been the mainstay of your PhD. But never lose sight of those serendipitous inspirations, assess the risk, and when feasible, seize the moment.

Perhaps something triggered a new thought, much like the experience of one of my former students. She arrived to look at information needs of women looking for health information, but on using an experimental webcasting system, she exclaimed, “this sucks!” Next morning, she approached me with a new idea: when are systems engaging, and how do we know? Three years later, PhD in hand, she has become one of the world’s leading experts on how to assess whether a technology is engaging or not.

Sometimes an opportunity emerges, unexpectedly, and from orthogonal places. Another PhD student and I attended a meeting at a high tech firm who thought they needed someone who knew how to index documents; in all honesty, I could only silently groan “boring,” but we went in with open minds. Several meetings and a slew of non-disclosure agreements later, she became the only social science PhD student with a lucrative PhD fellowship at this high tech firm. Rather than treating the problem like just another indexing or speculative data mining exercise, she used her critical analysis skills and insight into the problem they identified. Her hypothesis about the relationship between document type and information relevance (which was not her initial intended research focus) reset her PhD direction and led to an award-winning thesis.

It is so easy to work in a lock step: proposal, to confirmation review, to data collection and analysis, and then the long slog to the dissertation viva, and finally a PhD results. Along the way, one can lose sight of the purpose for doing a PhD in the first place. It is not about the DDP or doing yet another literature review or writing yet another paper or even about the data, it is very much about the findings -- new knowledge, and yes, as idealistic as it sounds: making a difference.

Sometimes, those insights emerge from unexpected places, and sometimes the problem materializes from unanticipated interactions. Often it is worth pausing and questioning whether your pathway needs a course correction. But, if that “ah ha” moment arrives unexpectedly, embrace it. Yes, it can be risky, but the rewards for success (and why would one think otherwise) are intellectually and even pragmatically gratifying.

Elaine Toms
Professor of Information Science
Information School

“If that “ah ha” moment arrives unexpectedly, embrace it”
Thoughts on the 3 Minute Thesis (3MT)

Three minutes and only one slide to convey the importance of your PhD to a non-specialist audience. Two doctoral researchers who made it to the University final give their thoughts on the competition...

Hi, my name is Sofia. I am from Portugal but I am currently living in Sheffield. I came here to do a PhD in the field of biomechanics at the Insigneo Institute for in silico medicine.

I do believe that if we fully understand something we should be able to explain it to others using simple words. Every time we are giving a speech we should think about our main message, the reason why we are giving it in the first place and the response we are expecting from our audience. I am happy that I joined the 3MT and reached the University final. I think the quality of entrants was high and I learned from others. It really is a good exercise, allows us to step back, see the big picture and appreciate it, reminding us of the reason why we are doing the research that we are. This also increases our motivation. I met Idayat through this competition and she supported me from the beginning, I think we made a good team.

My name is Idayat, a first year research student at CISTIB (Centre for Computational Imaging and Simulation technologies in Bio medicine) and a University finalist in this year’s 3MT competition.

I would normally never enter a competition where I have to explain my research in lay terms in 3 minutes or worse with just 1 slide! Yes, 3 minutes and 1 slide. But I did it, and better, I survived. I learnt more about myself; dealing with my fear and anxiety, my approach to learning, and I found a new friend, Sofia. So if you are familiar with the fear of speaking in front of a crowd, want to improve your communication skills with a lot of informal support, here is your chance to mess up at presenting without consequences. If you wish to challenge yourself to achieve more or simply just want a chance to win £750 to attend any conference of your choice, then sign up for the 3MT next year.

“We strongly recommend the 3MT competition to other PhD students. Achieve more, get out of your comfort zone and speak up!”
Represent Your Research Overview from the Doctoral Academy Interns

Sam Fox and Kathleen Hudson, the Doctoral Academy Interns for 2014/15, reflect on the Doctoral Academy “Represent Your Research”. event; what it was all about, outcomes and hopes for the future.

In March of this year we launched the viral video challenge called ‘Represent Your Research’ (#RepresentYourResearch). The premise of the challenge, not competition, was to encourage Doctoral Researchers to think about how they would present their research to a wide audience in an engaging and enterprising way using a 3-minute video. The main difference from traditional video competitions was that it wasn’t simply a case of submitting a research video – that was merely step one. To succeed in the challenge each participant was required to reach 1000 views of their video via the University of Sheffield Virtual Graduate School YouTube channel; sending the video viral! Presentation AND promotion were key to the success of any submissions.

We were thrilled to play host to a series of speakers at a formal launch event for the challenge in Inox Dine. The aim of the launch event was to provide students with information on key topics such as intellectual property and marketing, to aid them with the completion of the outlined challenge. We’ve now taken the talks from the event and created a series of video resources for Doctoral Researchers to use if they ever want more information and guidance on showcasing their own research (hosted on the Doctoral Academy webpages). The resources will also be available if it is decided to re-run the challenge in the near future, something we would love to see happen due to the unique nature of the format.

Whilst the levels of engagement with the challenge were low, we were really pleased to see the success of one of our current PGR students, Maria. She reached the target view count with weeks to spare ahead of the cut-off point, and her video titled ‘Language learning in the primary school’ has currently received well over the 1000 views.

Do you have any good news stories from your discipline that you would like to share with other readers?

Send your stories and photos to doctoraltimes@sheffield.ac.uk
Compiled by Vanilla

Clues

Across
1. Researcher spending many quid in grim inn curiously shows the right stuff (9,4)
7. Inharmonious Levant partners find harmony in go slow process. (4)
8. After taking 16 researcher demonstrates equanimity when using broken lab mop (6)
9. Case for osteology team initially walking out of anti-wrinkle treatment development. (3)
10. Turkish leader is haggard about losing Greek drachma (4)
11. Add a pair of chromosomes to a rat about to achieve serenity. (7)
15. "Und so weiter" say heads of European technology centre. (3)
17. Executive council comes together around early November coming up to a short December before the start of the year, showing propriety. (7)
18. Exotic spice from Turkey, gives more power to your elbow? (7)
20. Higgs boson discovered in research organisation hides liquid consonant. (3)
23. Overrun by a short medic from south west Argentina. (7)
25. Undergraduate registered in Libya turns nasty. (4)
27. Vilnius' Social Communication Institute heads downhill? (3)
28. Sandalwood perfume is inexpensive, we hear, and adds to research environment 'je ne sais quoi'? (6)
29. Mrs Winder appears in "Will he be mine?" (4)
30. Confused Don infects one of 15 out of arrogance (4-9)

Down
1. Researcher has understanding of where the end should be? (7)
2. Head of Science avoids status quo without support of trade union leaders for restrictions (6)
3. I'm published in magazine Arizona banned, so I suppose. (7)
4. Lies about 28 being 'too big to be this!' (4)
5. Pick up the trade union magazine briefly to get the full range of issues. (5)
6. If you mess around near Robin, it's obvious! (2-7)
12. Unfathomably deep, her strange bass must have taken a male chromosome. (5)
13. Loutish researcher says 'hooray' without right in confusion. (5)
14. Expulsion for biomedical engineering student with Swiss background. (5)
15. Environmental scientist uploads fifty virtual environments for mischievous characters. (5)
16. I've followed Alan and Matthew around before, briefly, to get T. (9)
17. Teaching Assistant caught in the mud? Stuck up, and that's a fact! (5)
19. I follow pope, I'm out and uncovered by archaeologist south east of Napoli. (7)
21. Finding small library in a hut, in a mess, makes one flounder. (7)
22. Switzerland follows the European Union about eventually meaning to swindle! (6)
24. Including alien on health informatics committee is a matter of principle. (5)
26. Crabs claw catches up to be measured in h bar. (4)

*Please complete if you are submitting your entry

Name: ..........................................................................................................
Department: ............................................................................................

Return entries to GRC, Dainton Building, Brook Hill

Congratulations to Andy Dickerson for submitting the correct solution to the Cryptic Crossword in the last edition.
Correct entries will be named in next issue.
First past the post will not only have the glory of their name in print they will have the option to select a name and compile a future crossword should they wish to do so!

Got the print version?
Want the pdf?
Link here