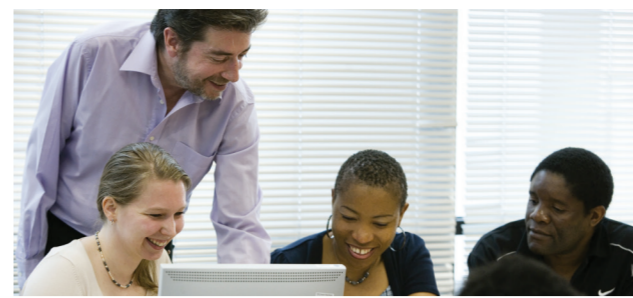
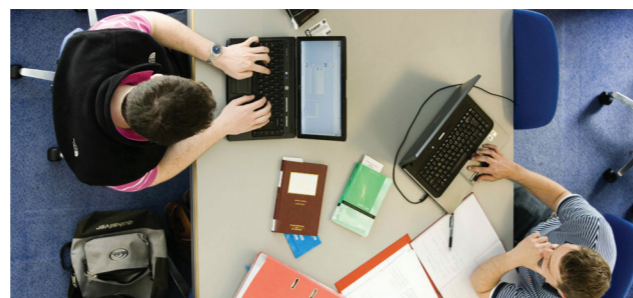


## Access to forensic science.

GOUA, M., COWIE, E., DEEGAN, W., MACMANUS, S., MCFADYEN, M.  
and MCKENZIE, C.

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*Originally published on RGU's CampusMoodle virtual learning environment.*



# ACCESS TO FORENSIC SCIENCE

## SCHOOL OF PHARMACY & LIFE SCIENCES

### SITUATION

Access to higher education is not a given for any pupil and more particularly for pupils who attended schools identified by the Local Authority as low attainment/ progression schools or from MD20 and MD40 postcode areas. Moreover, there is a great need to attract pupils to STEM courses and careers in order to enhance diversity and equality in science.

By offering a tailor-made programme on toxicology, includes biology and chemistry, to pupils from these groups, it is hoped that they will find that accessing university, and STEM courses, is possible.

### ACTIVITY

This after school programme was run over 8 practical sessions. The pupils worked in groups of 3 with an assigned student ambassador. The classes were based in our chemistry, microbiology, molecular biology and our computer laboratories. This allowed the pupils to experience situations that our students encounter every day as part of the curricula of the courses offered by the School of Pharmacy and Life Sciences. The sessions covered toxicology testing on plants, DNA extraction and analysis by Polymerase Chain Reaction (to find out where the bitter taste comes from), identifying harmful microbes in food to avoid poisoning as well as working with molecular models and the ChemDraw software to understand the importance of stereochemistry.



### IMPACT

The whole programme has been a great success from the perspective of the 18 participating pupils, as well as the staff and student ambassadors involved. This success can be evaluated at different levels, some more quantifiable than others. Over the course of the programme, we have seen the pupils grow in confidence and really owning their work at the showcase event when they gave practical demonstrations to their parents, guardians, teachers and other members of the public.

A series of questions were put to participants and here are some examples of their answers:

- When asked if they felt they had benefited from the Access to Forensic & Analytical Science programme, 93 % of pupils either agreed or strongly agreed.
- When asked if the programme has specifically encouraged them to apply to RGU, 73% of pupils were in agreement. 3 pupils gave a neutral response and one disagreed. One pupil who gave a neutral response explained that the course she is interested in is not available at RGU (the others didn't give any explanation). The pupil who disagreed with the statement realised that

### WHAT

Toxicology: where Biology and Chemistry meet.

### WHO

Marie Goua, Eoin Cowie, Wendy Deegan, Stephen Macmanus, Morag McFadyen, Craig McKenzie,

### KEYWORDS

Pupils, School Engagement, Widening Access to Higher Education

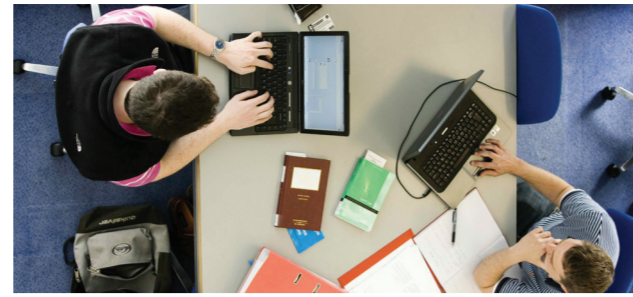
### RESOURCES

Customised material was produced for this programme and the pupils were given a handout. Information was also posted on a specific CampusMoodle page <http://bit.ly/1Omajpw>

### ACKNOWLEDGEMENTS

Access and Study Skills Unit, RGU, for the financial and ancillary support provided, more particularly Kaisa Macdonald, Rhona McComiskie, Elaine Sinclair and James Dunphy

The Biochemical Society  
 "Diversity and Equality in Science"  
 grant for funding



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## SCHOOL OF PHARMACY & LIFE SCIENCES

she is not as enthusiastic about Forensic Science as she thought, which is in itself a valuable outcome.

- Pupils were also asked whether being part of the programme has or will encourage them to apply to university. All pupils agreed that with this statement (with 87% strongly agreeing)..
- To conclude their feedback, pupils were given space to share any other views of their experience on the Access to Forensic & Analytical Science programme. Some of their responses are shared below:

*“It was great.”*

*“Lab work was a great experience.”*

*“I loved it, I met new people and I found the experiments great.”*

*“It was a new experience which I honestly enjoyed.”*

*“I really enjoyed this experience and would do it again.”*

*“Very well organised & very helpful. I would do it again.”*

100% of participants indicated that they would recommend the programme to a friend.

### REFLECTION

This experience was novel for all parties but it worked very well. The pupils were really enthusiastic and four out of six S6 pupils have applied to the School for next academic year, indicating the recruitment potential of such schemes.

The final year event created a real buzz for the parents/teachers but also with members of senior management within the university.

We believe this programme is extremely valuable in engaging pupils with STEM studies and careers, and it was particularly encouraging to see that most of the participants were female.

Regarding the structure of the programme, it will only be slightly modified for 2015-2016: there will be a change of name, from “Access To Forensic and Analytical Science” to “Access To Life Sciences”. it is a small change but we feel it will be a better reflection of what we are trying to convey. Moreover, one introductory session will be added at the start for the pupils to familiarise themselves with the laboratories and the different pieces of equipment, as we assumed a lot about their knowledge! One point that needs further attention is how to engage the pupils with our virtual learning platform: CampusMoodle. Although we tried to make Moodle an integral part of the programme it did not work very well. Having said that, the pupils had a successful experience without the online interactions.

The programme has achieved its main objective of encouraging pupils to apply to university and to STEM courses.

To note: The School of Pharmacy and Life Sciences also took part in the ‘Access To’ programme for Health Professions, which encompasses pharmacists and dietitians.

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