

School of Physics Newsletter Spring 2016

A warm
Bristol
welcome!

To give you a taste of student life in Bristol we've produced a special edition of the School of Physics newsletter.



Bristol Physics – a great course, in the heart of a dynamic city

We hope you have had the chance to visit us and find out about the degree courses at the School of Physics. Our students find the School a welcoming and supportive place to study for their degree.

You probably already know about our excellent, purpose built facilities. In recent years over £8m has been invested in our undergraduate teaching, including laboratories, study spaces, library and online resources, well-equipped lecture theatres and more. The School of Physics is in the heart of the [University](#) campus, and this dynamic institution is in an ideal location from which to explore the city of Bristol. In the following pages find out more about our degrees and the exciting things that our students have been up to.

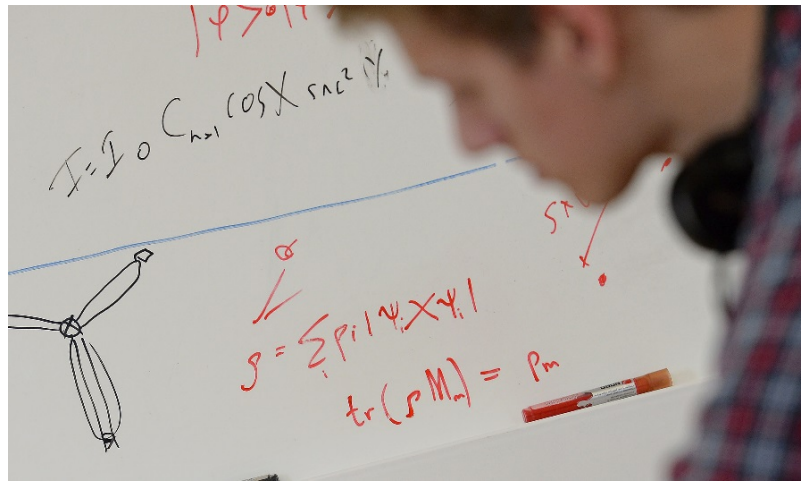
Professor James Annett
Head of the School of Physics

What Bristol means to me

Three students share their experiences of life as a student in Bristol.

Ilin is a first year student on the MSci (Hons) Physics degree

The University of Bristol is an almost ideal fusion of academic and student life. The University staff and facilities provide an exceptional place to grow academically, and the city of Bristol is ideal for students who want to enjoy life to its fullest.



The lecturers and tutors are very in tune with their students. They treat their students as equals and have more than enough patience to answer all questions that a curious student might have. One aspect that I found particularly interesting was the mechanics part of the core physics course, because it provided a more in depth and mathematically interesting perspective on something which was thought to be familiar.

If you are thinking of studying physics at Bristol, I would say go for it.

Some people are hesitant to pursue physics at university level – is it weird to like science? At the University of Bristol that is not the case. Everyone, from the students to the staff, is as passionate about physics as you are.

Natasha is a final year MSci (Hons) Physics and Philosophy student

Studying Physics and Philosophy at Bristol has been one of the best experiences of my life. Bristol is such a fun city to live in, with lots of cafes and bars, green spaces and a 'studenty' feel. After four years in the physics department, I think it's safe to say we are one of the friendliest in the university! One of the best things about the department is our own little cafe 'Physbar', run by the student society Chaos, where physicists gather at lunch for (very cheap!) coffee and snacks. Chaos also organises events, including bar crawls, summer barbecues and the legendary PhysBall.

I'm part of the university climbing club, UBMC, which has allowed me to go on some great trips (climbing in the sun in the south of France and waterfall ice in Norway) and make some of my best friends at university.

Studying for a joint honours degree is hard but rewarding. Physicists and philosophers both try to understand the universe, but sometimes in very different ways! Some of my favourite courses have been on quantum mechanics, the philosophy of physics and relativistic field theory. In your final year, a wider range of units to choose from allows more of an overlap between physics and philosophy. I've loved being able to do my physics project on symmetric quantum walks in discrete space, and my philosophy project on discrete time! Being able to approach problems from both sides has really made me value my degree.

My advice to anyone thinking of studying physics at Bristol is - get involved: join societies, go to events, meet new people, and absorb as much information as you can! I've loved my time at Bristol, and I'm sure you will too.



Hannah is a third year MSci (Hons) Physics student

I really enjoy being a student in Bristol, it is a fantastic city to live in! There are always things going on (university based or otherwise), it's small enough to get around, but big enough that it's got everything you want.

I am a member of the Stage Technicians' Association. We provide technical support for all of the student theatrical productions in Bristol. I joined in my first year as I had done a small amount of stage tech at school and very quickly became involved in everything that was going on, and I still am. There is a huge range of performing arts societies at Bristol, from pantomime to opera, and the chance to get involved with and work on these productions from our theatre in the Students' Union is an opportunity I wouldn't get anywhere else.

For me, the most interesting part of my Physics degree has been the quantum physics courses. It was something I hadn't really considered until coming to university, at which point I found it incredibly interesting. I have also enjoyed the chance to learn how to write computer programs to assimilate physics problems.

My advice to a student thinking of studying physics in Bristol? Be prepared to work hard - and be organised! I have very much enjoyed my time studying Physics and living in Bristol – but I have to manage my time effectively so that I can do everything outside of my degree that I want to.

Above: Hannah pictured with Laura – and the special gloves used for handling liquid nitrogen in the undergraduate lab (see below for the full safety gear!)

A view from the lab

Dr Gemma Winter

Dr Gemma Winter, Undergraduate Laboratory Manager, has worked in Bristol's undergraduate laboratory for seven years (and if you look at our [videos](#) you'll see her introducing the lab facilities). She writes:

I completed a physics degree and PhD in the Electromagnetic Materials group at the University of Exeter and found I enjoyed teaching students and technical aspects of my research more than the theoretical side, so working in physics teaching labs is the perfect place.

Experimental work forms a large part of our undergraduate degrees – we aim to produce graduates armed with practical skills as well as theoretical knowledge, and that requires practice.

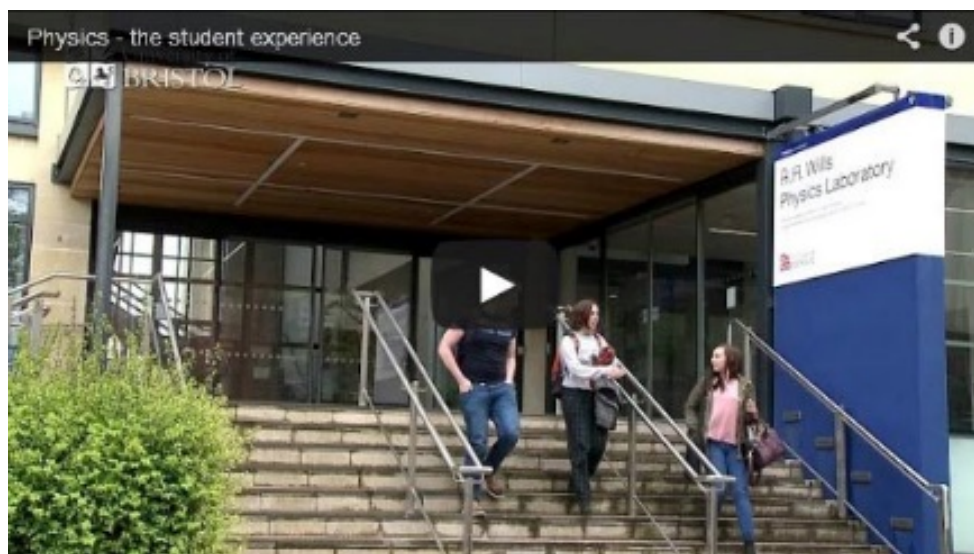


The practical courses in Physics are in a purpose-built teaching lab. It's large and bright, with different year groups located next to each other to encourage students and staff to interact with people at different levels - the opposite of the stereotypical image of a physicist sitting in a small dark room with only a laser for company!

Our students work in pairs, closely supervised by postgraduate demonstrators and academic staff. Students build up from short experiments in the first year, to longer experiments where they are encouraged to suggest and explore their own ideas for improvements. In their final year, students spend eight weeks working intensively on a unique research project, theoretical or practical, under the supervision of an academic staff member. By the end of their degrees, students will have experienced defending their research through interviews and presenting their work in scientific reports, posters and presentations. A web-based interactive resource, the Dynamic Laboratory Manual (DLM), provides material that helps students to learn background information or technical aspects of experiments before they arrive in the lab, tests to indicate areas requiring further study, and tips for improving lab work and reports.

We also regularly run outreach events within Physics, and often have groups of students from local schools coming in to the teaching labs, both for practical workshops designed to complement their studies, and post-exam activities – the 'Fun with Liquid Nitrogen' and 'Holography' sessions have proved popular, particularly when they end with ice-cream made super-fast using liquid nitrogen!

Setting students on the right path towards developing professional attitudes and abilities from the beginning is vital. With support and encouragement students attain the high levels that we and prospective employers expect – and we enjoy helping our students to fulfil their potential.



The School of Physics on video

Our [three short films](#) give you a great chance to find out a little more about the experiences of our students, and a glimpse of what Bristol physics is all about.

Don't forget there are also films on the [University of Bristol](#), the [Faculty of Science](#), and [student accommodation](#).

Don't miss news from the School of Physics! For regular brief news updates, why not follow us on [twitter](#) and [facebook](#)?



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