

The Warwick Systems Biology Centre builds on the University's strengths in the scientifically exciting and strategically important area of Systems Biology, an interdisciplinary subject bridging the biological and physical sciences, including Mathematics, Statistics and Physics. The Centre has seen substantial investment including sizeable infrastructure and dedicated premises. The Systems Biology DTC provides training for those aiming towards a career in cutting edge multi-disciplinary research, and offers MSc training and PhD research projects at the interface between the Life Sciences, the Physical Sciences and Mathematics.

Systems Biology academic staff are based in departments across the Faculties of Science and Medicine, providing a multi-disciplinary community to support the training and research of our students. Systems Biology's central location on campus makes it an excellent venue for fostering cross-discipline activities including lunch-time discussions, meetings, conferences, and workshops.

The Centre forms part of a local, national and international network which connects with researchers in many parts of the world. There are strong links with other EPSRC doctoral training centres and related research centres in Europe and elsewhere.

RESEARCH DEGREES

DOCTOR OF PHILOSOPHY (PhD) IN SYSTEMS BIOLOGY

TAUGHT MASTER'S DEGREES

MSc IN SYSTEMS BIOLOGY

CONTACT DETAILS

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RESEARCH AREAS

Systems Biology aims to understand a biological problem in terms of the interactions of many individual components, using quantitative biological methods to underpin those interactions. The aim of the Systems Biology research programme is to develop techniques that will enable us to solve biological sciences problems that are currently intractable.

The defining problems of Systems Biology include: large, variegated and high-dimensional data sets, interactions between levels of organisation, hard problems in parameter identification and optimisation. Skills and research topics include: Mathematical and computational modelling; Bioinformatics and statistics; Genomics and proteomics; Imaging and image analysis; Software design and development. Areas of particular interest are: Signalling and cell fate; Gene regulatory networks; Cortical circuitry development; Circadian periodicity.

RESEARCH DEGREES

DOCTOR OF PHILOSOPHY (PhD)

Standard Duration: 3 or 4 years

Warwick Systems Biology PhD projects involve both experimentation as well as theory and data analysis and are therefore appropriate for graduates from both the Life Sciences and Physical Sciences. We aim to provide our students with an insight into the problems and challenges in each of those fields, thereby gaining the communication skills to bridge the gap that exists between the individual disciplines. SBDTC PhD students are trained to be intimately familiar with advanced mathematical and computational techniques and their use in data analysis, molecular modelling and experimental design.

WARWICK SYSTEMS BIOLOGY CENTRE

(incorporating the Warwick Systems
Biology Doctoral Training Centre (DTC))

www.warwick.ac.uk/go/wsb



Heather Riley

*Joint Master's/PhD programme
Systems Biology Doctoral Training Centre*

“Once I had completed my undergraduate degree in Biological Sciences, it became clear that to increase my employability I needed to undergo more training. I obtained a funded position at Warwick Systems Biology Doctoral Training Centre (SBDTC) for a joint taught Master’s and PhD, with the aim of learning how to analyse biological data using sophisticated statistical and mathematical techniques, and learn about new biological methods. SBDTC has links to life sciences, mathematics, engineering, chemistry and statistics. The Centre strongly promotes interdisciplinary science, and encourages collaborations with all scientific disciplines, in order to maximise the final result of a project. During my time at Warwick I secured funding from the American Study and Student Exchange Committee (ASSEC) to attend a Gordon Research Conference in California, chaired by my supervisor. I have also been awarded a three-month funded fellowship at the Parliamentary Office of Science and Technology (POST), where I will gain experience in scientific policy and learn how to communicate cutting-edge research to a non-scientific audience. I have greatly enjoyed my time at Warwick, and believe the vast array of skills obtained here will help me in any career path that I choose.”

APPLICATION FACT FILE (RESEARCH DEGREES)

Entry Requirements

Students with a first or 2:i degree in mathematics or physical sciences or biological sciences are invited to apply. Candidates must have the motivation to develop research across the scientific disciplines.

English Language Requirements

IELTS 6.5, TOEFL (iBT) 92 or equivalent

Application

All applications are made online at www.warwick.ac.uk/go/pgapply

Tuition Fees

(2011/2012 fees. Please note that fees for 2012/13 will be published online in spring 2012.)

Home/EU: Full-time £3,900, Part-time £2,340

Overseas: (Band 2 – lab based)
Full-time £15,460, Part-time £9,276

Funding

There are a number of studentships available within various research groups involved in the Warwick Systems Biology Research Centre. Potential applicants should contact individual members of staff or the Director of Graduate Studies for information on studentships. Details of the Chancellor's Scholarships and other funding opportunities are available from: www.warwick.ac.uk/go/graduateschool

TAUGHT MASTER'S DEGREE

MSc IN SYSTEMS BIOLOGY

Standard Duration: 1 year full-time

Places available: 10

The MSc in Systems Biology prepares you to work at the interface between disciplines. The MSc course consists of 2 research projects, one "wet " and one "dry", and 8 modules such as Quantitative Biology, Numerical Methods for Modelling, Mathematical Models of Biological Systems and Technologies for the Study of Systems Biology. The MSc provides an ideal training for students from single discipline backgrounds in biological or physical sciences to progress to a PhD in the interdisciplinary subject of Systems Biology.

APPLICATION FACT FILE (TAUGHT MASTER'S DEGREES)

Entry Requirements

Students with a first or 2:i degree in Mathematics, Physical or Biological Sciences are invited to apply. A level or equivalent in mathematics and preferably at least one of Biology, Chemistry, Computing or Physics and the motivation to develop research programmes across the scientific disciplines are required.

English Language Requirements

IELTS 6.5, TOEFL (iBT) 92 or equivalent

Application

All applications are made online at www.warwick.ac.uk/go/pgapply

Tuition Fees

(2011/2012 fees. Please note that fees for 2012/13 will be published online in spring 2012.)

Home/EU: Full-time £6,080, Part-time £3,040

Overseas: Full-time £16,000, Part-time £8,000

Funding

Stipends: BBSRC funded bursaries are available for the MSc. UK students may apply for full funding (tuition fees and stipend) and EU students may apply for part funding (tuition fees only). Self-funding students are encouraged to apply. Details of other funding opportunities are available from: www.warwick.ac.uk/go/graduateschool