

Courses in Ocular Prosthetics

Nottingham Trent University has an international reputation for innovation in product design, with particular emphasis on medical product development. The University's [Design for Health and Wellbeing Research Group](#) has partnered with professional ocularist John Pacey-Lowrie in the development of new techniques and technologies in prosthetics with the aim of improving the patient experience during the design and fitting stages. An outcome of this research is a programme of training for new and experienced ocularists. Courses take place at the city-centre campus in Nottingham and offer a CPD certificate.

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About John Pacey-Lowrie and making the 'Windows of the Soul'

John Pacey Lowrie is something of a perfectionist. Since 1976 he has been making bespoke ocular prosthetics, keeping up with improvements in materials and technology to make his artificial eyes as realistic as possible. However there was one thing that frustrated him; while his prosthetics could move, he couldn't simulate the very thing that makes the eyes 'the windows of the soul', the dilation and contraction of pupils in reaction to light.

In 2010 John met with Dr Phil Breedon, a specialist in smart materials science at NTU. In discussion they realised that the creation of the image of a dilating and contracting pupil is achievable through the use of electroactive polymer technology. As ever, finding finance for the development project was a challenge, but John was able to support a bursary for a Masters student at NTU to create a prototype prosthetic eye which dilates and contracts as required. Work continues on this prototype to become a working bespoke ocular prosthetic.

However, ever the perfectionist, John is not yet satisfied. Different people will have different dilation and contraction patterns depending on their age, health and lifestyle so John's vision is for a computer model which will allow him to tailor the reaction of the eye to the individual, giving them the confidence that their prosthetic is as lifelike as modern technology can provide.

The drive for perfection continues and John has found that the route to excellence in the future is partnership in the present with those at NTU who are the forefront of materials and technology science.

Visit his website: www.johnpaceylowrie.com

About the Design for Health and Wellbeing Research Group

The Design for Health and Wellbeing Research Group at Nottingham Trent University aims to build collaborative partnerships for developing research that informs the evidence base for practice and improves health and wellbeing. The research group seeks to address the changing needs of medical research and society, including:

- social factors and health (prevention, intervention, individual, and collective wellbeing)
- medical device development and additive manufacturing processes
- health management and communication of health - including telemedicine
- biomaterials - including dental, cardiovascular, ophthalmics and orthopaedics.

http://www.ntu.ac.uk/apps/research/groups/22/home.aspx/group/143489/overview/design_for_health_and_wellbeing