

## School of Physics and Astronomy Masterclasses: Autumn 2017

We are offering an exciting opportunity for Year 12 and Year 13 pupils to learn about cutting-edge physics direct from researchers active in the field. These popular science sessions will involve talks, workshops, discussions and handson activities.









Nano and Beyond: Quantum Physics and Atom Technology Saturday 7th October 2017, 10am – 2:30pm

This masterclass will introduce students to the world of state-of-the-art nanotechnology via lectures, hands-on experiments and discussion groups. Participants will have the opportunity to pattern a surface at the nanoscale using a scanning probe microscope; investigate the interaction of light with liquid crystals; understand how researchers can image nanostructures too small to be viewed with light and discuss the future and potential of nanotechnology with staff and students. A free lunch will be provided.

Particle Physics and Cosmology Saturday 14th October 2017, 11am – 3pm

This masterclass will focus on the fundamental particles and forces and what we can learn about them from the Large Hadron Collider and cosmological observations. What is dark matter and how can we find it? What does the Higgs particle do? What is string theory and are there extra dimensions? Through lectures and hands-on activities, this masterclass will address these and other questions. A free lunch will be provided.

Attendance is free of charge.\*

\*a £10 returnable deposit with application is required

Places are limited, to register visit: <a href="http://www.nottingham.ac.uk/physics/outreach/masterclasses.aspx">http://www.nottingham.ac.uk/physics/outreach/masterclasses.aspx</a>