

Post IGCSE course: Experimental Physics using Data Loggers and Computers

Dr Andrew French. (First run Cloister Time 2017). Physics Department. Laboratory P5/6.

In a modern science or engineering laboratory, data will nearly always be recorded automatically via electronic sensors. This means measurements can be taken at a much higher rate, and for much longer than achievable using the manual techniques that you will have developed so far. In this course you will experience the wide range of sensors available at Wincoll. These have been incorporated into fourteen specially designed experiments which cover the full range of Physics: Mechanics, Thermodynamics, Optics, Radioactivity, Electricity, Magnetism and Waves. By the end of the course you will have practical experience of how to set up experiments which include data-logging, and will gain extensive training in the use of Excel, MATLAB and PowerPoint. You will use these tools to write up each experiment. You will also receive some training in digital photography.

This course is aimed at those interested in Pre-U Physics, and ideally Physical Sciences or Engineering at University. If you own a laptop, you will make good use of it.

Online resources will be available from http://www.electicon.info/physics_notes.htm