

Oxford Physics Group Project 2015 - 2016: National Instruments P_11

Project title	Automating manual Physics Experiments
Project type	Experimental
Company	National Instruments
Mentor	Beejal Shah
Local supervisor	TBC
Project description	<p>National Instruments provide measurement and automation equipment, some of which is supplied to educational institutions for use in teaching and learning. This project will give you an opportunity to learn about hardware and software widely adopted in Science and Engineering. This is an educational project focusing on practical learning for university-level Physics. Use modern computer based measurement techniques, based on National Instruments hardware and software to improve a select number of 1st and 2nd year labs of your choice. It is anticipated that this project will be based mainly on the experiments located in the Oxford Physics Teaching Laboratories, though you could also consider other experiments at a similar level if you wish, or develop your own. You will be expected to assess the experiments in terms of the skills and techniques that they aim to train students in, and select some to develop on the basis of both educational benefits and a business case for National Instruments. The automation work itself will involve graphical-programming using LabVIEW and interfacing between the instruments and computers. Once the experiment(s) is/are</p>

developed you will be required to prepare operating instructions and compare the automated and manual versions.

Students doing this project will be expected to enter the National Instruments Student Design Competition. More information can be sought from the NI mentor.