

Extension Activities

We have a strong post-A level Physics group that partakes in various activities. Our post-A level courses are designed to give students a taste of the things to come when they leave us and move onto degree courses. Although our post-A level students have a solid grounding in mathematics that allows us to make limited excursions into theoretical physics, our emphasis is on teaching what physicists are doing when they are predicting how Nature behaves, not teaching any tricks (elaborate mathematics) so that students can do it efficiently. In this way we try to mimic Feynman's Maya priest, who explains his elaborate calculation of the position of Venus by counting beans!

Our course covers advanced mechanics, Special Relativity and Maxwell's equations, quantum mechanics, cosmology and astrophysics. There is a vibrant collaboration between this course and its equivalent in the Chemistry department. On occasions, team teaching is done in which two dons with separate specialties lecture to a single group. The post-A level courses can lead to project work which in the past has been written up and presented at various scientific conferences (e.g., at ANPA '99 & '00, at PIRT '00, at the Rutherford Appleton Laboratories' Young Scientists Awards, at the King's College Canterbury's Sixth form Science conference, and also at the Millennium Showcase exhibition at the House of Commons in April 2000).

More recently we have devoted much attention to the Olympiads. Our goal is to gauge our activities against an absolute World Class standard.

The department is also heavily involved in researching new ways of teaching physics using ICT. We have teamed up with software companies to develop physics applications, and more recently Wykehamists in the post-A level course have been involved in testing beta versions of state-of-the-art software.

Physics Olympiad and Challenge results and the Stewart McDowall Prize

British Physics Olympiad Commitment

The department has a strong involvement in the British Physics Olympiad organisation, and in the training of the British Physics Olympiad team prior to the international competitions. Our post-A level course in physics is based on the International Physics Olympiad syllabus, so we have the apparatus and expertise to deliver training to team members. Before they go on to the international competition, the UK team (which is usually made up of 7 students from all over the UK) assembles at Winchester College right at the end of Cloister Time. They are accommodated and taught, as Wykehamists. In June/July 2005 we trained both the UK and Canadian National Teams in a joint venture.

Usually members of the post-A level set are automatically entered for the national team selection competition. Others in the fourth and fifth years are put forward to the second round of the selection competition on the basis of the Stewart McDowall Prize exam, which is set by the Head of Department and taken in early January. The Stewart McDowall prize is awarded to the Wykehamist who has shown the most promise in the bid for a place in the British Physics Olympiad Team. It is awarded at the Medal Speaking Ceremony at the end of Cloister Time.

British Physics Olympiad and Challenge Results

1999 1 Gold, 2 Silver, 1 Bronze (Joseph Virden went on to represent the UK at the Padua Olympiad, where he won a Silver medal).

2000 1 Silver, 4 Bronze I, 3 Bronze II.

2001 4 Bronze I, 3 Bronze II, 3 Commendation.

2002 3 Gold, 3 Silver, 2 Bronze I, 1 Commendation (David Wyatt and Owen Jones were selected for the team, David Wyatt went on to represent the UK at the Bali Olympiad, where he won a Gold medal).

2003 2 Gold, 3 Silver, 1 Bronze I (Alex Trenchard in the last 15).

2004 2 Gold, 9 Silver, 5 Bronze I, 1 Bronze II (Gen Zhang in the last 15).

2005 4 Gold, 2 Silver, 5 Bronze I, 10 Bronze II (Oscar Bennett and Chris Kerr were selected for the team, Oscar is going to represent the UK at the Salamanca Olympiad and Chris is first reserve).

2006 4 Gold, 1 Silver, 10 Bronze I, 14 Bronze II.

2007 6 Gold, 4 Silver, 12 Bronze I, 5 Bronze II.

Dons teaching in Middle Part and Vth Book can put pupils forward for the National Physics Challenge (this is a junior version of the National Physics Olympiad).

2001 4 Gold, 5 Silver, 6 Bronze

2002 3 Silver, 5 Bronze

2003 2 Gold, 4 Silver, 6 Bronze

2004 5 Gold, 9 Silver, 8 Bronze

2005 5 Gold, 7 Silver, 8 Bronze

2006 5 Gold, 6 Silver + top student in UK

2007 15 Gold, 20 Silver (candidates entered were ALL from MP).