

The Engineering Department and the Colleges of Cambridge University



In-Term Study Tour

November 30 and December 1 2016

A unique programme for
aspiring Oxbridge
Year 11 and 12 girls.



Welcome to our brochure for the fourth annual Cambridge Study Tour.



Girls thinking of applying to Oxbridge with an interest in Engineering or other STEM subjects should consider this opportunity. An outline programme is on page 4.

Highlights

- Practical work in the Faculty of Engineering
- Application advice and guidance
- Dinner in a University College
- Presentations by academic staff and undergraduates
- Opportunity to make own presentation in the University of Cambridge
- Industrial Visit
- 4* Hotel accommodation near Cambridge
- Meeting like minded girls from other schools
- Join a new network of aspiring female scholars



Some further details about the programme

The tour



You will visit the worlds leading materials research TWI are the world's leaders in joining technologies.

The tour includes practical demonstrations of current research where employees are finding engineering solutions to global problems for companies such as Rolls- Royce plc, BP, Areva, Airbus etc. These studies include metal 3D printing, testing of under sea oil/gas lines, structural integrity of vehicles, sports fabric welding which was developed for the Olympic Games, failure analysis of surgical instruments, Apple products to name but a few.

You will then visit Cambridge for an evening tour of this world famous city with the 31 colleges that make up the university which was founded over 800 years ago.

Building on this, you will be invited to one of the Cambridge colleges for a tour and informal dinner. Afterwards you will have the opportunity to make presentations to academics and industrialists about your chosen STEM topic.

Finishing Day 1 with a lively STEM lecture by a senior member of the Engineering Department is an excellent preparation for Day 2, an experimental day in the Department of Engineering at Cambridge University.



Day 2 »

Day 2



At the beginning of day two there is a walk-through tour of the undergraduate facilities in the Engineering Department, including the new Dyson Centre for Engineering Design, followed by a “round-robin” of typical first and second year experiments.

You will work in groups on: Materials: tensile testing of metals and polymers (including brittle fracture of steel and rubber in liquid nitrogen), heat treatment of steels, and demonstrations of superconductivity and other phenomena; Fluids: the “V-notch weir” for measuring flow-rates, including an introduction to dimensional analysis.

Following this, representatives of Cambridge Student Engineering Societies will present their extra-curricular projects – for example, Cambridge University Eco-Racing: the building and racing of a solar-powered car across Australia, and the Cambridge University Eco-House Society where students design and build structures for poorly housed communities in Brazil and Ecuador.

Finally there will be lunch in another College, with an opportunity to meet current Engineering undergraduates, and to ask questions about applying to study STEM subjects/ Engineering at Cambridge and other universities.

The visit will give you an outstanding insight into STEM, some hands-on experience of undergraduate Engineering experiments, as well as a unique experience of what it is like to live in and study at this impressive university.

Overnight accommodation in a 4* hotel near Cambridge is included

Information about travel and programme costs is available from Solutions 4 Schools.

Solution 4 Schools contact Information

info@solutions4schools.org.uk
07802439961

