

**carmel**  
college

Inspiring minds.  
Shaping futures.

Gifted and Talented

# SCIENCE AND ENGINEERING

PROGRAMME 2016-17



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GIFTED AND TALENTED PROGRAMME 2016-17

Carmel's **GIFTED AND TALENTED PROGRAMME** provides a structured programme of activities, events and support to our Gifted and Talented students. It offers the best possible preparation for application to **Oxbridge, Russell Group and other prestigious institutions**, as well as onto Medicine, Dentistry and Veterinary Science degree courses. It also provides support for our talented students in specialist fields such as Art, Music, Physical Education and Drama/Theatre Studies.

As a Gifted and Talented student studying Science based courses at Carmel, you will be supported, encouraged and challenged to **achieve your potential** in your studies. Our **highly-qualified and committed Biology, Chemistry and Physics tutors** will help you develop the high order skills necessary for success at degree level on courses such as Natural Sciences at Cambridge; Biology, Chemistry or Physics at Oxford; Engineering and other science disciplines. Please note there is also a separate **Medicine, Dentistry and Veterinary Science** Programme.

## Success Stories

**Paul Swift** (De La Salle) graduated from **Trinity College, Cambridge University** with a top 1st in Natural Sciences. Paul now works for BAE Systems.

**Thomas Lamont** (St Gregory's) is now reading for a DPhil in Earth Science at **University College, Oxford University** having studied Maths, Geography, Physics, Critical Thinking and Chemistry at Carmel.

**Fiona Townsend** (Altrincham) is studying Physics at **Imperial College, University of London** after achieving an A\* in Physics and an A\* in Mathematics. She did not initially choose to take Further Mathematics, but was allowed to pick it up in the A2 year to help her application to a top institution and went on to achieve an A in AS Further Maths.

**In fact, in the last three years alone, we have had eleven students progress onto Science related courses at Oxbridge. This year's include:**

**Ryan Ellison** (Rainhill High) A\*A\*A\*A – Biochemistry, **Exeter College, Oxford**

**Mathew Best** (St Edmund Arrowsmith, Whiston) A\*A\*AA – Natural Science, **Clare College, Cambridge**

**Chloe Maloney** (The Prescott School) AAB – Biological Sciences with Management, **Imperial College, London**

## What will I be offered through the College Gifted and Talented Programme?

At the beginning of your first year in college you will be enrolled onto **Carmel's Gifted and Talented Programme**. You will be offered the chance to attend the **Haydock Oxbridge Conference** and to visit Oxford and Cambridge at the end of your first year. You will also be supported in applications for summer projects, such as the Nuffield Research Placement Scheme, which provide incomparable opportunities to appreciate the applications of modern scientific research. This will also provide you with invaluable experiences to talk about during university interviews.

You will also have the opportunity to complete the **Extended Project Qualification (EPQ)**, which will allow you to choose an area or aspect of Science in which you have a particular interest. You will then be encouraged to use your research skills to produce a 5000 word study. This qualification is highly-regarded by leading universities as it demonstrates your enthusiasm for the subject and ability to work independently in an area you are personally interested in. Moreover, it is often a point of focus for discussion at admission interviews.

## What will the Science and Engineering Gifted and Talented Programme offer me?

As part of the Programme, you will be supported by our **Science and Engineering Gifted and Talented Coordinator**, who, assisted by departmental staff, will offer you specialist help to ensure that you develop your interests and skills in these subjects. You will receive advice as to which degree course will best suit your future career ambitions, and you will be supported at all stages during the UCAS application process.

### In the first year:

You will be encouraged to enrol in SciSoc, an enrichment which takes place regularly throughout the year. During these sessions, the following skills will be developed:

- the ability to engage in independent research on contemporary medical/scientific issues
- the ability to learn through problem solving
- the ability to discuss and debate ethical issues and respond to challenges regarding those views

Other aspects will be covered such as:

- writing a successful Personal Statement
- developing effective interview skills (through mock interviews)
- the ability to analyse data

You will also be offered the opportunity to take part in the Biology, Physics and Chemistry Olympiad, the CERN trip and PAT Tests.

As you begin to consider which science related courses you may pursue at degree level, you will have the chance to **attend a variety of events and lectures** and the chance to meet scientists currently working in the science field. These will enable you to gain more experience of what courses involve at university and links to potential careers. There will also be **talks given by ex-Carmel students** studying Science related courses at prestigious institutions, students just like you.

### In the second year:

The goal in the early part of this year is to ensure a successful application. You will be offered:

- Substantial specialist help with completing your Personal Statement and application
- Interview practice conducted by our science staff and other external professionals related to the degree you are applying for
- Support with preparation for your entrance exams such as thinking skills tests.



SciSoc Enrichment - building floating gardens



Manchester University Trip about the ethics of animal testing.

2016's Gifted and Talented students visit the Oxbridge colleges



## Our students say..



"Being part of the Gifted and Talented Programme at Carmel has given me lots of additional support with my application for Biology at the most prestigious universities in the country. I found the Oxbridge talks were beneficial as they gave a clear insight into the application process and they really

influenced my decision to apply to Oxford. Throughout the application procedure I was given a lot of help, from perfecting my personal statement to interview practice. I initially thought this process would be very stressful but I found the whole experience very enjoyable and I was able to access a range of support within the college."

**Chloe Maloney**

Now at Imperial College, London studying Biological Sciences with Management



"Being part of the Gifted and Talented Programme at Carmel has really allowed me to grow and develop as a person. I remember back at high school listening to an Oxbridge presentation telling us to 'aim high', thinking at the time that it was a nice dream, but it was the Gifted and Talented

Programme at Carmel that helped me see that this was a reality. The specific support at Carmel also made sure I had the greatest chance of success with my application. Opening my offer letter was a very emotional moment, and even though I had to put in a lot of effort to get this far, I don't think I could have made it without the help of everyone at Carmel."

**Ryan Ellison**

Now at Oxford University reading Biochemistry

## Science and Engineering Gifted and Talented Calendar 2016-17

		GIFTED AND TALENTED PROGRAMME GENERAL	SCIENCE AND ENGINEERING GIFTED AND TALENTED PROGRAMME
2016/17	SEPTEMBER	Gifted and Talented Programme meeting; Gifted and Talented Societies begin	SciSoc Starts; Talks by Imperial and Cambridge; Headstart applications open for Engineering
	OCTOBER	Internal Exams – Gifted and Talented students not already on the programme are identified and enrolled	A programme to discover the different careers and courses in STEM
	NOVEMBER	Apply for Cambridge and Oxford Shadowing Scheme	'Other' Sciences – A programme designed to get students to consider other science disciplines at top universities (e.g. Earth Sciences, Material Sciences)
	JANUARY	Application for Sutton Trust and summer schools; Stage 2 of identification of Gifted and Talented students after internal exams	Nuffield Research Programmes application; Physics trip to CERN; Application for Headstart Programmes
	FEBRUARY	Should you be thinking about Oxbridge? - Talk	Continuation to Term 2 of SciSoc
	MARCH	Mansfield Study days at Oxford; Haydock Oxbridge Conference	Developing research skills
	APRIL - Early JUNE		Building personal statement Cambridge Chemistry Challenge
	Late JUNE	Careers Evening Talks	Departmental support
	JULY	Oxbridge Open Days; Summer schools start	Physics for BMAT support; Summer Enrichment offer; Chemistry Olympiad
2017/18	SEPTEMBER	UCAS preparation Early Applicants; Aim Higher evening; Oxbridge application training	SciSoc – Summer reading and research; Nuffield Research Placements
	OCTOBER	UCAS preparation Early Applicants; Aim Higher evening; Oxbridge application training	Personal Statement support; Application advice; Interview preparation sessions
	NOVEMBER	Early Application deadline; Internal Mock Interview Evening	Mock interviews as required
	JANUARY onwards	Oxbridge interview training	Mock interviews as required
	AUGUST	Support on results day	Departmental Support – Go for the A*! Departmental support on results day

### More Information

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