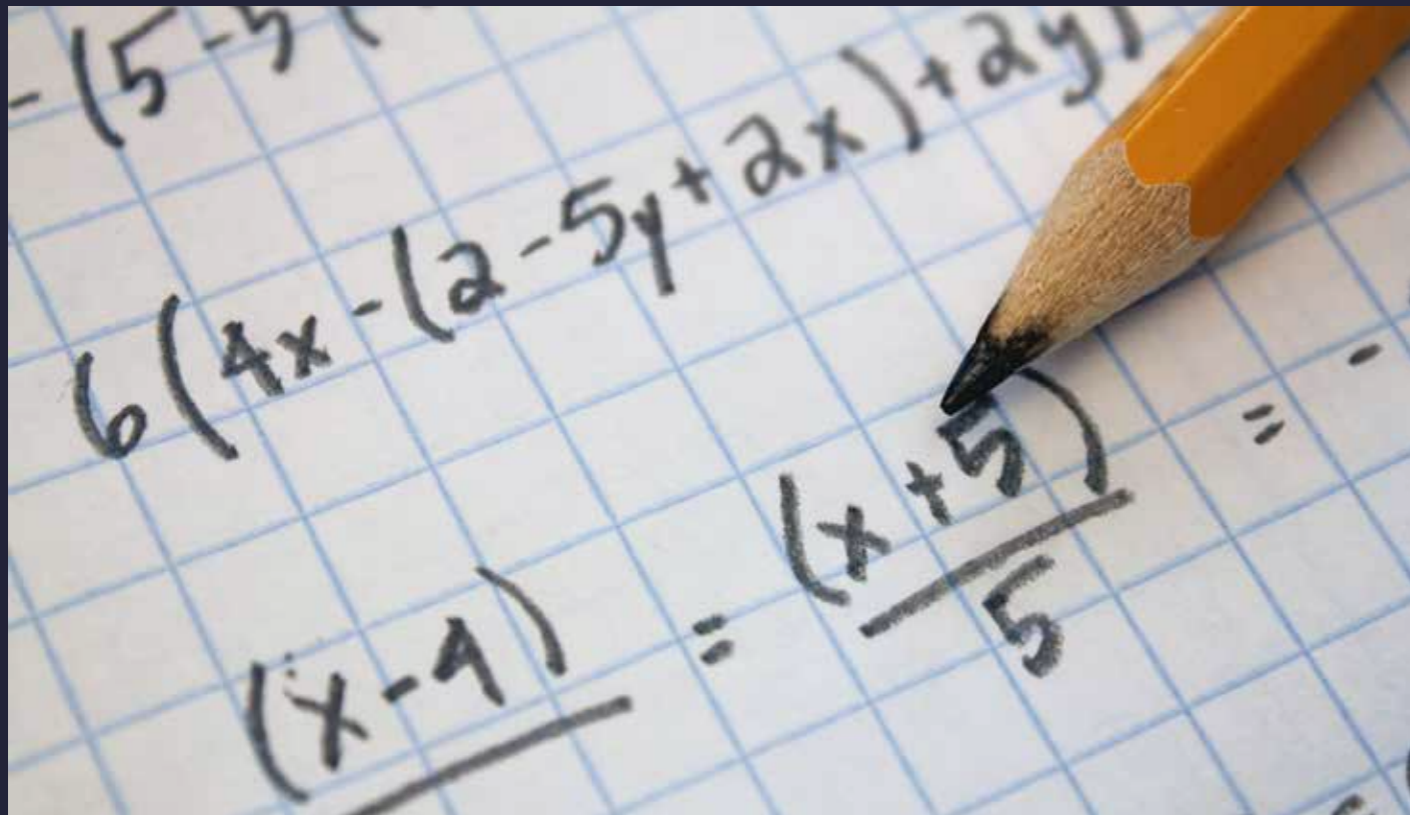




COURSE OVERVIEW

# Mathematics

Oxford College



## At a Glance

Price: £5,995

Ages: 16-17

Duration: 2 weeks

Starting Dates:

2nd July, 16th July, 30th July 2023

Location:

Oxford College

Summer Boarding Courses' Mathematics programme is designed for young people with a love of Maths! Students enrolled in our Mathematics programme will have the opportunity to sample an introduction to advanced mathematical theories, such as graph theory, algorithms, symmetry, fractals, calculus, and probability.

Using a fun and interactive teaching concept, students will discover mathematics in the real world, such as in how maths can be found in sport, art, nature, space exploration, codebreaking and friendship. As all lessons are conducted in English in a multinational environment, students will also be able to develop their English language skills.

Mathematics

# Sample Timetable

## WEEK ONE TIMETABLE

8:45-9:00	Morning Assembly			
9:00-10:30	<b>Mathematics Seminar</b> Introduction to Mathematics: History and Schools of Thought	<b>Mathematics Lecture</b> Tessellations and Group Theory	<b>Keynote Lecture</b>	<b>Mathematics Lecture</b> Complex Numbers <b>Mathematics Seminar</b> Sequences and the Golden Ratio
11:00-12:30	<b>Mathematics Time to Shine: A Mathematics Case Study</b> Research and preparation for a political presentation.			
13:30-14:45	<b>Mathematics Practical Workshop</b> Understanding and applying algorithms	<b>Mathematics Seminar</b> Fractals in Nature	<b>Industry Experience</b>	<b>Mathematics Seminar</b> Conic Sections and Space Exploration <b>Keynote Lecture</b> Leadership By Visiting Academic
15:00-16:15		<b>University Coaching</b> Interview Preparation		<b>University Coaching</b> Writing a personal statement <b>University Coaching</b> Public Speaking Skills
16:15-18:15	<b>Free Time</b> Tutorials once per week, 16:30-17:30 Career Counselling Clinic, 16:30-17:30			

## WEEK TWO TIMETABLE

8:45-9:00	Morning Assembly			
9:00-10:30	<b>Mathematics Seminar</b> Differentiation, Integration and Kinetics	<b>Mathematics Lecture</b> Conditional Probability	<b>Keynote Lecture</b>	<b>Mathematics Lecture</b> Mathematical Puzzles <b>Mathematics Seminar</b> The Prisoner's Dilemma
11:00-12:30	<b>Mathematics Time to Shine: A Mathematics Case Study</b> Research and preparation for a political presentation.			
13:30-14:45	<b>Mathematics Practical Workshop</b> Codes and Ciphers	<b>Mathematics Seminar</b> Bayes' Theorem and Game Theory	<b>Industry Experience</b>	<b>Mathematics Seminar</b> Advanced Mathematics in Use <b>Keynote Lecture</b> Success in Academia By Visiting Academic
15:00-16:15		<b>University Coaching</b> Interview Preparation		<b>University Coaching</b> Writing a personal statement <b>University Coaching</b> Public Speaking Skills
16:15-18:15	<b>Free Time</b> Tutorials once per week, 16:30-17:30 Career Counselling Clinic, 16:30-17:30			



# Time to Shine

Magic Numbers: Discovering the Mathematics Behind Everyday Phenomena

Oxford College's Mathematics Time to Shine helps students find the fun in complex Mathematics theories. In this collaborative research project, students will investigate the theories behind famous mathematical riddles, such as the The 7 Bridges of Konigsberg and The Birthday Paradox, and present their findings to their peers in the Time to Shine ceremony.



## What You'll Learn

- ✓ An overview of major subjects in advanced Mathematics, such as Graph Theory, algorithms, fractals and complex numbers.
- ✓ How to produce the perfect university application for Mathematics
- ✓ Guest speeches from leading academics in the field of Mathematics.
- ✓ Take part in our exciting Magic Numbers Time to Shine project, in which you and your classmates will investigate fun and engaging mathematical riddles.
- ✓ Through fun and engaging lesson activities, develop and apply your 21st century skills, such as critical thinking, communication skills, collaborative skills, and original thinking.



# Industry Experience

A tour of the Engineering laboratories at Oxford University Engineering department, to see how Mathematics is applied in computer and engineering sciences.

A highlight of our academic programme is our Industry Experience afternoons, where students take part in a series of workshops and lectures led by top industry professionals and academics in their respective fields. The Industrial Experience element of our courses provides a profound level of insight so that students can further make informed decisions as to whether their future career choices are right for them. Our College students will be introduced to a real-world professional environment in their chose field of study, where they will absorb knowledge through workshops, lectures and Q&As.

## Book your place

A booking can be made online on our website [summerboardingcourses.com](http://summerboardingcourses.com)

Course places are limited so we recommend booking early. If you are booking on behalf of a family, please let us know at the time of booking.



