

# Year 13 Advanced Mathematics Problem Solving Course 2024/2025.

## Course aims and description.

■ The course, which is offered gratis, is suitable for students in either of the following categories:

1. who intend to either pursue an undergraduate degree in a mathematical subject.
2. sit one of the STEP examinations in summer 2025
3. who enjoy solving non-routine mathematical problems

■ The course is calculator free.

■ The course consists of twelve classes each of 1.5 hours duration (4.30 to 6 pm on Mondays), in university venues between September 2024 and April 2025.

■ Preparatory reading material will be given in order to familiarise students to the subject matter of each problem class.

■ The maximum intake is 25 students.

■ To apply for places in the course or for further enquiries contact:  
mathsor@le.ac.uk

■ The topics for this course are given in the table below. University venues will be arranged in due course and enrolled students informed.

## The course schedule

1. Algebra 1 Sept 16
2. Trigonometry Sept 23
3. Differentiation Oct 14
4. Coordinate Geometry Nov 11
5. Algebra 2 Nov 25
6. Inequalities Dec 9
7. Sequences and Series Jan 13
8. Exponentials and Logarithms Jan 20
9. Curve Sketching Feb 10
10. Proof March 3
11. Vectors March 17
12. Integration April 28