

Year 12 Advanced Mathematics Problem Solving Course 2024/2025.

Course aims and description.

- The long running University of Leicester/AMSP year 12 mathematics problem solving course is intended for students whose extant enthusiasm, engagement and ability with the subject is already at a high level.
- The primary aim of this course is the further development of such students' mathematical insight, thinking and problem solving strategies.
- Participation in this course will enhance such students preparation for the MAT, AEA and STEP and similar examinations.
- The problems in the calculator free course are unstructured and challenging and based on the y12 pure mathematics course.
- The course consists of 12 classes each of 1.5 hours duration (4.30 to 6 pm on Mondays), in university venues, between October 2024 and May 2025.
- There is no course fee.
- Prior study materials are provided to prepare students for each problems class.
- Students who attend regularly will obtain a School of Computing and Mathematical Sciences Certificate of Participation. Students who attend regularly and are successful in the course assignment will obtain a School of Computing and Mathematical Sciences Certificate of Achievement.
- The course has a maximum intake of 25 students. There is an application process. Students who successfully solve a set of problems in the application process will obtain a place on the course. Students should email mathsor@le.ac.uk to apply for a place on the course.

Course schedule

1. Algebra 1 Oct 7
2. Coordinate Geometry 1 Nov 4
3. Series 1 Nov 18
4. Calculus 1 Dec 2
5. Algebra 2 Dec 16
6. Coordinate Geometry 2 Jan 27
7. Series 2 Feb 3
8. Trigonometry Feb 24
9. Logarithms March 10
10. Integration March 24
11. Optimisation April 7
12. Roots of polynomial equations May 12