

A LEVEL FURTHER MATHS EASTER REVISION COURSE

AT THE UNIVERSITY OF YORK



PROSPECTUS



BUILDING CONFIDENCE
IMPROVING EXAM TECHNIQUE
ACHIEVING HIGH GRADES

www.ALevelMathsRevision.com

COURSE OVERVIEW: HELPING STUDENTS GET BETTER RESULTS

Our revision course helps students achieve top grades. It's as simple as that. Our course takes place each year during the school Easter holidays on the prestigious University of York campus.

Located in the picturesque and historic city of York, this quiet and studious campus environment is an ideal place for students to immerse themselves in the experience of learning how to revise for their upcoming A Level Further Mathematics exams.

Should students be travelling from further afield, the university does have bookable accommodation, further details of which can be found at [ALEvelMathsRevision.com](https://www.alevelmathsrevision.com) in the "Frequently Asked Questions" section.

IMPROVING REVISION TECHNIQUE

Revision is a complicated and time-consuming process; students often find it difficult to know where to start. Our courses help students break that cycle by overcoming the three main hurdles to productive revision.

THE THREE KEY FACTORS OF EFFECTIVE REVISION

	The Hurdles	Our Solutions
Motivation	Picking up those books and past papers to revise when you feel behind can seem an immensely arduous task. Finding the motivation to even start can be a huge challenge.	The course teachers are fully qualified and experienced A Level Further Maths schoolteachers with exam board marking experience. Our enthusiasm and passion for helping young people excel really does help propel students into a positive and productive state of mind. This is imperative for a productive revision regime.
Knowing what to revise	Students often only revise topics which they already know how to do. They find the concept of trying to revise something that they do not yet fully understand quite baffling.	We cover the entire Further Maths Pure Core syllabus over the duration of the course so we will uncover and fill any gaps in knowledge that may be present. We will provide a comprehensive revision pack so that whenever gaps are uncovered, students have everything they need to hand in order to revise productively and effectively.
Knowing how to revise	Having overcome the above hurdles, how do you now actually go about improving your understanding of the topics in which you need to improve?	The course teachers are full-time fully-qualified schoolteachers of A Level Further Maths with extensive knowledge of the curriculum and how to put it across to students. We draw on this vast knowledge and wealth of experience to pass on to students exactly how they too can become self-sufficient when revising, drawing upon and sharing the banks of resources we have built up over the years.

COURSE CONTENT

Day 1

1. Matrices

- Determinants and Inverses
- 2d and 3d Matrix Transformations
- Solving Simultaneous Equations
- Invariant Lines and Points

2. Proof By Induction

- Divisibility
- Summations
- Inductive Sequences
- Matrices

3. Complex Numbers

- Complex Roots of Polynomials
- Modulus and Argument
- Loci and the Argand Diagram
- Exponential Form of Complex Numbers
- DeMoivre's Theorem
- Summing Series
- Nth Roots of a Complex Number

Day 2

1. Roots of Polynomials

- Relationship Between Coefficients and Roots
- Transforming Polynomials

2. Further Calculus

- Maclaurin Series
- Mean Value of a Function
- Volumes of Revolution
- Improper Integrals
- Partial Fractions
- Choosing a Suitable Substitution
- Hyperbolic Functions

3. Hyperbolic Identities

- Inverse Hyperbolic Functions
- Differentiation and Integration

4. Polar Coordinates

- Sketching Functions in Polar Form
- Converting Between Polar and Cartesian Form
- Area Enclosed by a Polar Curve

Day 3

1. Further Vectors

- Equations of Straight Lines in 3d
- Scalar (Dot) and Vector (Cross) Products
- Planes and Intersection
- Standard Formulae

2. Differential Equations

- First Order Differential Equations (The Integrating Factor Method)

3. Second Order Differential Equations

- Homogeneous SODEs
- Nonhomogeneous SODEs
- Simple Harmonic Motion
- Damped and Forced Harmonic Motion

4. Coupled First Order Simultaneous Equations

- Reduction to SODEs
- Predator-prey Models

*Actual timings may differ slightly. A judgement as to how long is spent on each topic will be made on the day and topics may be shuffled around to better suit the needs of the individuals attending the course.

HELPING STUDENTS COMBAT EXAM NERVES

If you know the material and can get high marks in your own revision then you are 90% of the way there. There are still, however, the dreaded exam nerves to deal with.

In helping combat exam nerves, a one-size-fits-all approach is simply not good enough. Over the four days we get to know students; their strengths, their weaknesses and, most importantly, their personalities. We draw upon our vast experience of having helped a varied array of students, each with differing needs and character traits, in order to provide helpful and straightforward tips on how to keep calm and target the marks in the upcoming A Level Maths exams.



COST

We are open and honest about the cost of our courses. We charge £450 for a three-day course which works out at £150 per day. This provides excellent value for money; for this you will receive:

- 18 hours of group tuition in total from a fully qualified subject expert
- A ratio of 1 fully qualified and experienced teacher per 10 students
- A revision pack tailored to your individual exam board
- A quiet, studious learning environment located in the University of York

HOW TO BOOK A PLACE

If you would like to book a place or simply would like to talk to us and get more information, there are three easy ways to get in contact with us:

- Visit [ALevelMathsRevision.com](https://www.ALevelMathsRevision.com) to fill in an online form and request a callback.
- Call us on 01904 864 264.
- Email us at courses@ALevelMathsRevision.com

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John is a great tutor and his A level revision course is excellent. My children learnt so much from him during the course. He rapidly identifies each student's weak areas which he then resolves through clear explanations and plenty of worked examples. I whole-heartedly recommend him.

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