

Course information for Parents**Key Stage: 5 Subject: Further Mathematics**

Faculty Area	Mathematics	Head of Department	Mr M Sheppee msheppee@thehazeleyacademy.com
Examination Board	MEI	Specification Codes	H645/H635

Subject Content:

Core Pure (this is mandatory and it's 50% of the qualification): covering topics such as complex numbers, matrices & transformations, vectors and 3-d space, Advanced complex polynomials, series, calculus including advanced differential equations, polar coordinates, hyperbolic functions, etc.

Mechanics (optional) : covering topics such as Dimensional analysis, forces, work, energy & power, momentum & impulse, centre of mass, etc.

Statistics (optional): covering topics such sampling, Discrete random variables, bivariate data, chi-squared tests, etc.

Extra Pure (optional): covering topics such as recurrence relations, groups theory, extra work on matrices and multivariable calculus.

Modelling with Algorithms (optional): covering topics such as algorithms, networks, linear programming, etc.

Numerical methods (optional): use of technology, solutions of equations, numerical differentiation and integration, etc.

Further Pure with Technology (optional): using a computer algebra system, a spreadsheet, a graph plotter and a programming language to investigate curves, explore topics in number theory and explore the solutions of families of differential equations analytically and numerically

The qualification comprises 50% mandatory Core Pure and then a combination of the optional modules.

Additional Equipment Needed

Any scientific calculators with the following features

- iterative function
- ability to perform calculations with matrices up to at least order 3 x 3
- ability to compute summary statistics and access probabilities from standard statistical distribution

Graphical calculators are recommended e.g. Casio FX- CG20. However Calculators with a facility for symbolic algebra, differentiation and integration are not permitted)

Assessment Details:

A-level: 100% exam, in May/June 2020.

The exam comprises one mandatory Core Pure paper and 2 or 3 other papers depending on module combination.

All students will sit the AS exam in May/June 2019 to assess their progress and also help them gain an important qualification prior to taking the full A-level exam.

To be successful students need to enjoy mathematics, have an excellent work ethic and an excellent grasp of all the GCSE algebra topics.

What can I do to support my child at home?

- Encourage your child to use the websites listed below to help them revise and practise topics covered
- Encourage your child to complete all homework and hand them in on time
- Encourage your child to come to the after school support sessions.
- Get your child to start doing past exam papers early and not wait till the last few weeks before the exam.
- Ensure your child comes to school regularly and also catch up should they miss any lesson.

Recommended resources for the course:**Books:** MEI Further Maths textbooks**Websites:** *Links* – www.undergroundmathematics.org, www.integralmaths.org, www.physicsandmathstutor.com ,**Teaching Staff Contact Details**

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