## SDCC Mathematics Year 13 A-level Further

### Course Information

Students are following the MEI Further Maths A-level course, consisting of three parts each is examined with its own examination paper

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|---|---|---|
| Core Pure | 2 hrs and 40 minutes | 50% |
| Mechanics (Major) | 2 hours 15 minutes | 33.3% |
| Modelling with Algorithms (Minor) | 1 hour 15 minutes | 16.7% |

Grades available: A*, A, B, C, D, E

Mock exams will take place towards the end of November

### Term One - What will we be learning?

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|---|---|
| Complex numbers | Forces |
| Matrices and transformations | Work energy and power |
| Series | Momentum and Impulse |
| Calculus | |
| Hyperbolic Functions | |
| Differential equations | Algorithms |

### Term Two - What will we be learning?

| | |
|---|---|
| Vectors | Circular motion |
| Polar coordinates | Hooke's Law |
| | Centre of Mass |
| | Vectors and variable forces |
| | Networks |
| | Linear Programming |

### Term Three - What will we be learning?

Revision and Exams

### How will we be learning?

Our aim is that teaching is student led using inquiry and investigation to foster independent learners with a passion for maths. We endeavour to develop the intellectual maturity of our students to enable them to take risks and overcome the challenges that they encounter. Home learning is set weekly to consolidate and extend the learning in class. Students must also consolidate their learning by writing up their notes, completing class work and reading further into a topic.

### Try this at home

- **Textbook** Students will be required to purchase course textbooks. These are available as either hard copies or e-books.
- **Integral:** Make sure you know your username and password to access additional resources, revision aids and practice tests and exam papers.
- **Practise basic skills** regularly. It's important that your calculus skills are solid as is your use of surds, powers and logarithms.
- **Research** real life applications of topics taught e.g. Who uses Calculus? Moments? Vectors?
- **Visit** www.examsolutions.net for videos explaining certain topics