DRAYTON MANOR HIGH SCHOOL

ADVANCED LEVEL COURSE 2020-2022

Mathematics

Specification Edexcel

Entry Requirements
A grade 6 in Maths GCSE

What do I need to know or be able to do before taking this course?
You need to have a strong grasp of GCSE mathematics. You will be given a task to do over the summer before starting year 12 which focusses on the most complicated of GCSE topics. Algebra and number skills should be excellent to acieve well at A level maths

What will I learn on this course?

- **Core Mathematics**
  When studying core maths at A Level you will be extending your knowledge of such topics as algebra and trigonometry as well as learning some brand new ideas such as calculus. If you enjoyed the challenge of problem solving at GCSE and using mathematical techniques, then you should find the prospect of this course very appealing.

- **Applied Mathematics**
  Applied mathematics is comprised of mechanics and statistics. When you study mechanics you will learn how to describe mathematically the motion of objects and how they respond to forces acting upon them, from cars in the street to satellites revolving around a planet. You will learn the technique of mathematical modelling; that is, of turning a complicated physical problem into a simpler one that can be analysed and solved using mathematical methods. When you study statistics you will learn how to analyse and summarise numerical data in order to arrive at conclusions about it. You will extend the range of probability problems that you started for GCSE by using the new mathematical techniques studied on the core mathematics course. You will study large data set and use statistical knowledge to analyse that data set.

How is the course structured?

Unit	Title	Weighting	Assessment Type
Paper 1	Core Maths 1	1 third	Exam
Paper 2	Core Maths 2	1 third	Exam
3	Applied Maths	1 third	Exam

What skills will I develop by doing this course?

- As well as covering an advanced level study of Mathematics, this course could enable you to develop some Key Skills which will be essential to you whatever you go on to do afterwards. The Key Skills that you develop on this course will depend on the units that you cover. Your teacher will be able to give you further advice as you study for this course.

What kind of student is this course suitable for?

This course is suitable for students with a keen interest in mathematics and problem solving. Students taking science based subjects will find mathematics complements their studies.

What could I go on to do at the end of my course?

Advanced Level Mathematics is a much sought after qualification for entry to a wide variety of full-time courses in Higher Education. There are also many areas of employment that see a Mathematics Advanced Level as an important qualification and it is often a requirement for the vocational qualifications related to these areas.
Higher Education courses or careers that either require Advanced Level Mathematics or are strongly related include

- Economics
- Medicine
- Engineering
- Accountancy
- Teaching
- Computing
- Information Technology

If you wanted to continue your study of Mathematics after Advanced Level, you could follow a course in Mathematics at degree level or even continue further as a postgraduate and get involved in mathematical research.