Curriculum Intent, Implementation and Impact

Year 13: PURE 2

Subject: A Level Mathematics – Edexcel 9MA0

Year group: 13

Lessons per fortnight: 8

<table>
<tr><th>Term</th><th>Topics studied.
Add dates and any assessments included</th><th>Extended learning opportunities
(homework, controlled assessments, field work, trips etc.)</th><th>How parents could support students</th></tr>
<tr><td>Term 1</td><td>Unit 1:
1. Proof
Unit 2:
1. Algebraic methods
2. Partial fractions
Unit 3:
2. Functions and Graphs
Unit 4:
3. Sequence and Series
Unit 5:
4. Binomial expansion

YR 12 baseline assessment if YR 12 end of year assessment was below MEG.

<u>Term 1: Week 3</u></td><td rowspan="3">Complete all corresponding exercises from the textbook to build confidence.

MEI worksheets to further extend learning. Teacher or peer marked.

Use key websites with videos to help strengthen areas of concern.
Dr Frost
Physics and maths tutor
TL Maths - video support on all topics

Create index cards to help with recall.

Go through topic based past paper questions to familiarise with exam techniques.

End of topic/ unit tests that are teacher marked with feedback.

Post assessment support for Unit test and homework: Thursdays P6.

There will be opportunities for hands-on experiments to understand the concept of forces and kinematics.

In Statistics, students will be encouraged to use the large data set to understand how data is used in the world of work. There will be opportunities to use technology to manipulate the data and produce useful statistical diagrams and distribution analysis.</td><td rowspan="3">Discuss the learning at home. A lot of A Level maths is based on modelling situations. Discussing and talking through these ideas helps embed Maths concepts in real life.

Support with independent work at home. Students are encouraged to set aside the same amount of time at home for every taught hour in school. 1 Hour lesson = 1 hour independent work at home. Supporting this from the start is key to long term success in this course.

Set aside time to support during key dates in the term, e.g. end of unit assessments.

Ensure fully equipped: Folders, calculator, lined paper for independent work.</td></tr>
<tr><td>Term 2</td><td>Unit 6:
5. Radians
6. Trigonometric functions
7. Trigonometry and modelling

<u>Assessment 1</u>:
MOCK 1 exam.
Full AS Paper 1 and 2
Paper 3: Pure 2 work on content that has been covered to date.
<u>Term 2: Week 1</u></td></tr>
<tr><td>Term 3</td><td>Unit 7:
8. Parametric Equations
Unit 8:
9. Differentiation
Unit 9:
11. Numerical methods
Unit 10:
11. Integration part 1</td></tr>
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Term 4	Unit 11: 11. Integration part 2 Unit 12: 12. Vectors **Start Applied modules:** **Statistics 2:** Unit 1 Stats: 1. Regression, correlation and hypothesis testing Unit 2 Stats: 2. Conditional Probability Unit 4 Mechanic: 4. Moments **<u>Assessment 2: MOCK 2.</u>** Full Pure 1 and 2 paper. 2 hours each. Paper 3: AS Applied paper. 1 hour and 15 mins **<u>Term 4 week 2 and 3.</u>**		
Term 5	Unit 3 Stats: 3. The normal distribution Unit 5: 5. Forces and Friction Unit 6: 6.Projectiles Unit 7: 7. Application of Forces Unit 8: 8. Further Kinematics		
Term 6	GCE Summer Assessments		

IMPACT:

By the end of 2 years of studying the A Level Maths course, students would have made considerable connections between the various strands of topics in Pure and Applied maths. These links will help build their confidence in using these concepts in problem solving and modelling real life situations. Students will be assessed throughout the course with a series of formative assessments and summative assessments. The formative assessments give students the opportunity to evaluate their personal learning journey by identifying gaps in their knowledge and addressing these gaps in a manner that suits them. The summative assessment gives students a view of their potential grade in this course at that point in time. Students are also supported through their decision process for the next stage of their education. Problem solving is a key skill developed in A level maths and plays a big part in their future choices.