SUBJECT: A Level Mathematics **YEAR**: 12

HEAD OF DEPARTMENT: Mrs L Crowthers

GROUPING POLICY: Year 12 and Year 13 are taught separately

COURSE CONTENT:

Students will follow the Edexcel Mathematics Specification:

https://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2017.html

The Mathematics course consists of three main areas:

Pure Mathematics, Mechanics and Statistics

Pure Mathematics

14 Topics:

1. Algebraic Expressions
2. Quadratics
3. Equations and Inequalities
4. Graphs and Transformations
5. Straight Line Graphs
6. Circles
7. Algebraic Methods
8. The Binomial Expansion
9. Trigonometric Ratios
10. Trigonometric Identities and Equations
11. Vectors
12. Differentiation
13. Integration
14. Exponentials and Logs

Mechanics

4 Topics:

1. Modelling in Mechanics
2. Constant Acceleration
3. Forces and Motion
4. Variable Acceleration

Statistics

7 Topics:

1. Data Collection
2. Measures of Location and Spread
3. Representation of Data
4. Correlation
5. Probability
6. Statistical Distribution

7. Hypothesis Testing

What will homework look like?

Homework will be most frequently related to the assessment of the current topic being studied. This may take the form of set learning tasks or questions from the provided text book or questions from previous examination papers. It may take the form of a research task that helps support the introduction of a new unit of study. Students will be encouraged to explore and evaluate different methods for revision to identify their preferred learning style.

ASSESSMENT

Students will set written examinations. Calculators can be used on each paper.

Examinations:

There will be 3 two hour examinations:

- Paper 1 assesses content from Pure Mathematics
- Paper 2 assesses content from Pure Mathematics
- Paper 3 assesses content from Statistics and Mechanics

ADDITIONAL INFORMATION

How can I support my child in this subject?

It is important that your child is doing work outside the classroom and practising all the topics. If a student misses a lesson, they should make sure that they have caught up with the missed work and practised the exercises before the next lesson.

How can I support my child with exams?

Students have access to a wide range of resources both electronic and also paper versions. Examination practice is essential to succeed at A level and students need to structure their revision so that they have time to practise their skills. In this subject students need to regularly work on past paper questions so any revision timetable must be well planned and adhered to.

Independent study is very important but students should also be encouraged to seek help whenever necessary.