SUBJECT:	**MATHEMATICS**
Title of GCE:	**A Level Mathematics**
Exam Board:	**AQA**
Syllabus Number:	**7357**

Course Overview:

Mathematics at A Level builds on content that students will have met at GCSE, but also introduces them to new mathematical concepts produced by some of the greatest minds of the last millennium.

Paper 1 :
Proof, Algebra and functions, Coordinate geometry, Sequences and series, Trigonometry, Exponentials and logarithms, Differentiation, Integration, Numerical methods

Paper 2:
Any content from Paper 1 and content from: Vectors ; Quantities and units in mechanics; Kinematics; Forces and Newton's laws; Moments

Paper 3:
Any content from Paper 1 and content from: Statistical sampling; Data presentation and Interpretation; Probability; Statistical distributions; Statistical hypothesis testing

A Level Assessment:

Paper 1 - Pure Mathematics 1
2 hours; worth 33.3% of A level

Paper 2 - Pure Mathematics 2 & Mechanics
2 hours; worth 33.3% of A level

Paper 3 - Pure Mathematics & Statistics
2 hours; worth 33.3% of A level

Coursework/Controlled Assessment:
Not applicable.

Career Opportunities:

Maths is a fascinating subject in its own right but is also a requirement for many higher education courses, especially sciences and engineering. Many of our former A level students have continued with their maths studies at a higher level, while others have gone on to take a wide variety of subjects leading to careers in teaching, engineering and finance.

'A Level Maths is interesting, challenging and extremely rewarding. It opens up so many doors for future jobs and other opportunities in life.' (A level Mathematics student).

Students who study this subject often complement it with:

Further Maths, Psychology, Biology, Chemistry, Geography, Physics, Business

Useful revision websites:

www.integralmaths.org

SUBJECT: **FURTHER MATHS**
Title of GCE: **AS or A Level** Further Mathematics
Exam Board: **AQA**
Syllabus Number: **6360**

Course Overview:
A-level Further Mathematics is designed to broaden and deepen the mathematical knowledge and skills developed when studying A-level Mathematics. It may be studied alongside or after taking A-level Mathematics and provides a stimulating experience for those who enjoy the subject.

The Further Pure units build upon the techniques in Algebra, Geometry, Trigonometry and Calculus developed from the Pure Core units as well as introducing topics such as complex numbers, matrices, proof, hyperbolic functions, polar coordinates and differential equations.

Mathematical applications make up the remainder of the qualification and there are various options to suit the needs of individual students.

The applications fall into three strands:

- Discrete – networks, algorithms, sorting, linear programming, mathematical modelling.
- Mechanics – forces, energy, motion, kinematics, projectiles, mathematical modelling, moments, collisions and stability.
- Statistics – probability, data handling, probability distributions, estimation, correlation and regression and hypothesis testing.

Students will focus on two of the three strands.

A Level Assessment:
All students are entered into AS Further Mathematics after Year 1 of studying. If they choose to continue with A Level Further Mathematics there will be three exams of 2 hours in the June series.

Career opportunities:
Studying both A-level Mathematics and A-level Further Mathematics provides a foundation for further studies in any Science or Maths-based course, ranging from Computer Science, Medical Sciences, and Psychology to Statistics, Management and Actuarial Science.

Students who study this subject often complement it with:
Mathematics (compulsory), Biology, Chemistry, Maths, Physics

Useful revision websites:
www.integralmaths.org

For more information or advice contact: nstow@johncolet.co.uk