Year 13 Further Mathematics

Learning	Loving	Living
Key Knowledge	**Well informed global citizens**	Wider learning
Link apply and adapt	Believe they can make a difference	Leadership, teamwork, collaboration
Build knowledge and skills	Shape community and school	Success for all abilities
Self-regulated, reflective independent	Care about the environment and each other	Value creative subjects
Know what they are good at and what to improve	Responsible for their own behaviour	Interactions with the world of work
Stretched, challenged supported	Grow spiritually	Safety, mental and physical health
Wider ideas culture and the world	**Respect and tolerance**	Equipped for their unique future
Use technology flexibly and responsibly	Charity, volunteering and fundraising	**Apply to the world beyond**

Curriculum Intent

Provide pupils with the knowledge and skills they need in order to take advantage of opportunities, responsibilities and experiences of later life

- Teach students key skills such as how to analyse and evaluate statements through statistical calculation and interpretation.
- Offer students curriculum related opportunities such as the support programme for A* students organised by Imperial College
- Develop their understanding of knowledge in lessons and assess these through regular exam-based practice.
- Empower students to think strategically when solving problems.
- Regular use of independent work to consolidate and extend their understanding on all parts of the specification.

Clearly state the end points that pupils are building towards and the knowledge and skills required to reach them

- Clear learning objectives in individual and sequential lessons.
- Students are aware of their TMG and have a clear understanding of their strengths and areas of improvement through the use of the assessments on a regular basis and feed forward on assessments.
- Clear outline of assessment requirements with use of student friendly markschemes from Edexcel.

Is planned and sequenced so that knew knowledge and skills build on what has been taught and builds towards clearly defined end points

- Students study Core Mathematics topics for papers 1/2 alongside Decision Maths and Further Pure topics for papers 3/4 allowing students to gain an understanding of the different aspects of Pure and Applied Mathematics so that they can build a full understanding of the subject.
- Students study each topic in clear chunks with integrated assessments which allows them to show skill progression.
- Pupils work through retrieval homeworks that imbed knowledge

Has high ambition for all pupils

- Regular use of stretch and challenge within lessons and on homework tasks.
- Challenging assessment tasks are used within each unit with students also given the opportunity to test their understanding with extension tests via the Integral platform from MEI.

- Problem solving skills are explored and developed.
  (2 lessons used for test and review of test- 3 weeks after or later completion of content-These are built into the timings of each chapter- see year 12 POS for possible alternative approach to testing to allow for course to be completed by Easter of Year 13)

Term	Topic NB To include Spaced memory retrieval	No. of Lessons	Assessment
Autumn 1 (7 weeks) Taught by Teacher 2 Taught by Teacher 1	Integration from Pure 2 (3 lessons) Complex Numbers : Chapter 1 **Core 2** (11 lessons) Vectors Further Pure 1 (8 lessons) Conic sections 1 Further Pure 1 (6 lessons)	28 lessons	Integral Assessment Pure Integration Integral Assessment Pure Complex Numbers Integral Assessment Pure Vectors
Autumn 2 (6 weeks) Taught by Teacher 1 **Taught by** **Teacher 2**	**October Assessment** Conic sections 1 Further Pure 1 (1 lesson) Methods in Calculus **Core 2** (9 lessons) Series **Core 2** (5 lessons) Inequalities Further Pure 1 (6 lessons) Volumes of revolution **Core 2** (7 lessons) Polar coordinates **Core 2** (2 lessons)	30 lessons	Integral Assessment Pure Conic sections 1 Integral Assessment Pure Methods in Calculus Integral Assessment Pure Inequalities Integral Assessment Pure Volumes of revolution

Spring 1 (6 weeks) Taught by Teacher 1 **Taught by** **Teacher 2**	Series **Core 2** (1 lesson) Methods in differential equations **Core 2** (8 lessons) Modelling with differential equations **Core 2** (6 lessons) Polar coordinates **Core 2** (6 lessons) Hyperbolic functions **Core 2** (8 lessons) The t formulae Further Pure 1 (1 lessons)	30 lessons	Integral Assessment Pure Series Integral Assessment Pure Methods in Differential Equations Integral Assessment Pure Polar coordinates Integral Assessment Pure Hyperbolic functions
Spring 2 (6 weeks) Taught by Teacher 1 **Taught by** **Teacher 2**	Modelling with differential equations **Core 2** (2 lesson) conic sections 2 Further Pure 1 (7 lesson) Taylor series Further Pure 1 (3 lessons) The t formulae Further Pure 1 (6 lessons) Methods in Calculus Further Pure 1 (6 lessons)	24 lessons	Integral Assessment Pure Conic Sections 2 Integral Assessment Further Pure The t formulae Integral Assessment Pure Methods in Calculus

Summer 1 (6 weeks) Taught by Teacher 1 **Taught by** **Teacher 2**	Taylor series Further Pure 1 (3 lessons) Numerical Methods Further Pure 1 (8 lessons) Methods in Calculus Further Pure 1 (1 lesson) Reducible differential equations Further Pure 1 (9 lessons)		Integral Assessment Pure Taylor Series Integral Assessment Further Pure Numerical Methods Integral Assessment Further Pure Differential equations
Summer 2 (7 weeks)	External Exams		

Review			
Date	Comment	Staff Code	Actions?
4/7/21	Programme of study completed & checked.	KEL	To be reviewed un Summer 2022.