Mathematics

Year Group 13

Half Term 1

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| Number of Hours | Teacher 1 Topics | Number of Hours | Teacher 2 Topics |
| 3 | Differentiation 2 | 4 | Further hypothesis testing |
| 8 | Trigonometric identities | 8 | Functions and further transformations of graphs |
| 10 | Differentiation 2 part 2 | 2 | Sequences and series |
| Reasons behind order of topic in this half term  Differentiation 2 is recapped at this stage to ensure students are confident with the methods, as they will be required knowledge for the work on tri identities.  Trig identities are essential at this stage as they form a key part of the calculus topics from this point onwards.  Differentiation 2 part 2 is now taught as it ties together the further differentiation methods and the trig identities.  Further hypothesis testing is taught now as it is the final statistics topic to be covered. We can now test some applied topics in key assessments.  Functions and further transformations of graphs are taught now as concepts from these sections are required knowledge for other topic areas.  We then teach sequences and series to ensure we have covered enough content to test in the mock examination as this topic is almost always covered in examinations. | | | |

Mathematics

Year Group 13

Half Term 2

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| Number of Hours | Teacher 1 Topics | Number of Hours | Teacher 2 Topics |
| 14 | Integration 2 | 5 | Sequences and series |
| 4 | Mock Revision | 2 | Proof 2 |
|  |  | 3 | Mock Revision |
| Reasons behind order of topic in this half term  Integration 2 is the final calculus topic. It is necessary to teach all of the differentiation and trigonometry before this to ensure all required content has previously been covered.  Proof 2 is taught at this point as it is a small topic to cover after the mock examinations. | | | |

Mathematics

Year Group 13

Half Term 3

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| Number of Hours | Teacher 1 Topics | Number of Hours | Teacher 2 Topics |
| 3 | Vectors | 8 | Rational functions and binomial expansion |
| 7 | Kinematics 2 | 4 | Parametric equations |
| 6 | Projectiles |  |  |
| Reasons behind order of topic in this half term  Vectors is taught directly before the mechanics topics as it is required knowledge for this applied Mathematics.  Now all of the pure mathematics topics have been covered we begin the mechanics content. It is essential the students have covered all aspects of the pure course before they are introduced to the mechanics content.  Rational functions and general binomial expansion are taught and integration 2 revised with their teaching.  Parametric equations require the use of the chain rule which was taught at the beginning of Year 13 teaching. | | | |

Mathematics

Year Group 13

Half Term 4

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| Number of Hours | Teacher 1 Topics | Number of Hours | Teacher 2 Topics |
| 8 | Forces and Newton’s Laws 2 | 9 | Numerical methods |
| 6 | Moments | 3 | Consolidation |
| 4 | Consolidation |  |  |
| Reasons behind order of topic in this half term  Now all of the pure mathematics topics have been covered we begin the mechanics content. It is essential the students have covered all aspects of the pure course before they are introduced to the mechanics content.  Numerical methods can be taught at any point.  Consolidation is an important part of the course. All timings are approximate and often lessons are missed for a variety of reasons so this gives a small amount of flexibility to staff. | | | |

Mathematics

Year Group 13

Half Term 5

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| Number of Hours | Teacher 1 Topics | Number of Hours | Teacher 2 Topics |
| 6 | Consolidation | 10 | Revision |
| 9 | Revision |  |  |
|  |  | 4 | Revision |
| Reasons behind order of topic in this half term  Consolidation and revision is built into the scheme of learning to ensure students are given ample time and support to prepare for final examinations. | | | |