<table>
<thead>
<tr>
<th>Unit Name</th>
<th>Main Ideas</th>
<th>Duration (weeks)</th>
<th>Assessment Item</th>
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| CALCULUS (b) | TECHNIQUES OF INTEGRATION involving:  
• Substitution  
• Trig Identities  
• Integration by Parts  
• Partial Fractions | 2 weeks | EMT Individual 3 weeks | Draft: 17 Aug Final: 24 Aug |
| CALCULUS (c) | TYPES OF DIFFERENTIAL EQUATIONS  
SOLUTION OF DIFFERENTIAL EQUATIONS | 2 weeks | | |
| REAL & COMPLEX NUMBERS (c) | REVIEW BASIC KNOWLEDGE  
DE MOIVRES THEOREM inc TRIG PROOFS  
POWERS OF COMPLEX NUMBERS  
SOLUTIONS OF EQUATIONS USING COMPLEX NUMBERS  
ROOTS OF COMPLEX NUMBERS  
PROOF BY MATHEMATICAL INDUCTION | 5 weeks | KAPS EXAM 90 minutes  
MAPS EXAM 90 minutes | Thursday 7 Sept  
Friday 8 Sept |
| DYNAMICS (b) | PROJECTILE MOTION  
SIMPLE HARMONIC MOTION  
UNIFORM CIRCULAR MOTION | 3 weeks | | |
| LINEAR PROGRAMMING (b) | REVIEW OF THE GRAPHICAL METHODS  
SIMPLEX TABLEAUX  
SIMPLEX METHOD TO FIND OPTIMAL SOLUTION | 3 weeks | KAPS EXAM 90 minutes  
MAPS EXAM 90 minutes | Exam block |

**Literacy Components**
- Speaking and Listening: Instruction, vocabulary
- Reading & Viewing: translate information between different forms, interpret diagrams
- Writing & Designing: support an argument using mathematics; use mathematical conventions and everyday language to provide solutions to routine and non-routine problems

**Numeracy Components**
- Number: use of rational numbers and basic operations
- Algebra: solutions to equations, use of indices and index laws
- Measurement: formulae for perimeter, area, surface area and volume
- Space: construction graphs of functions
- Chance & Data: use basic theoretical probability in more advanced applications

**ICT/Technology Components**
- Select and use ICTs in the processes of inquiry and research: use of a graphing calculator to confirm areas, use of calculator for calculations of probability, present and future values.
- Select and use ICTs to create a range of responses to suit the purpose and audience:
- Select and use ICTs to collaborate and enhance communication for an identified purpose and audience:
- Develop and apply ethical, safe and responsible practices when working with ICTs:
- Use a range of advanced ICT functions and applications: use graphing program to confirm results to EMT