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</thead>
<tbody>
<tr>
<td>1</td>
<td>23 Jan - 27 Jan</td>
<td>Topic 11</td>
<td>Complex numbers (Chapter 1) - Operations &amp; representations (review) - De Moivre’s theorem</td>
<td>Contact teacher/attend lessons</td>
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<td>Australia Day Public Holiday (Thu 26th)</td>
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<td>2</td>
<td>30 Jan - 3 Feb</td>
<td>Topic 11</td>
<td>Complex numbers (cont.) - Applications of de Moivre’s theorem</td>
<td>Contact teacher/attend lessons</td>
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<td>Senior Secondary Orientation Day (Wed 1st)</td>
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<td>3</td>
<td>6 Feb - 10 Feb</td>
<td>Topic 12</td>
<td>Matrices &amp; applications (Chapter 2) - Matrix operations (review) - Markov chains and probability applications</td>
<td>Contact teacher/attend lessons</td>
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<td>GOAL SETTING DUE</td>
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<td>4</td>
<td>13 Feb - 17 Feb</td>
<td>Topic 12</td>
<td>Matrices &amp; applications (cont.) - The steady state - Input-output (Leontief matrices) and economics applications</td>
<td>Contact teacher/attend lessons</td>
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<td>BSDE Swimming Carnival (Fri 17th)</td>
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<td>5</td>
<td>20 Feb - 24 Feb</td>
<td>Topic 13</td>
<td>Vectors (Chapter 3) - Vector review - Dot (scalar) product</td>
<td>Online Test (submit results by Tue 21 Feb)</td>
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<td>6</td>
<td>27 Feb - 3 Mar</td>
<td>Topic 13</td>
<td>Vectors (cont.) - Vector cross product - Vector applications</td>
<td>Contact teacher/attend lessons</td>
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<td>AT3 available on BlackBoard (Fri 3 Mar)</td>
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<td>7</td>
<td>6 Mar - 10 Mar</td>
<td>Topic 13</td>
<td>Vectors (cont.) - Equation of a plane</td>
<td>Diagnostic Test 4 (submit by Wed 8 Mar)</td>
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<td>Revision for ST4 (Topics 11-13) - Check BlackBoard for revision program</td>
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<tr>
<td>8</td>
<td>13 Mar - 17 Mar</td>
<td>Revision &amp; Exam</td>
<td>Revision for ST4 (cont.)</td>
<td>ST4 EXAM DUE Friday 17 March</td>
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<td>Supervised Summative Test ST4 (Topics 11-13)</td>
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<tr>
<td>9</td>
<td>20 Mar - 24 Mar</td>
<td>Topic 14</td>
<td>Structures &amp; patterns (Chapter 6) - Sequences &amp; series (APs, GPs, others), applications - Method of finite differences</td>
<td>Contact teacher/attend lessons</td>
</tr>
<tr>
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<td>Year 12 QCS Practice (Wed 29th – Fri 31st)</td>
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<tr>
<td>10</td>
<td>27 Mar - 31 Mar</td>
<td>Topic 14</td>
<td>Structures &amp; patterns (cont.) - Proof by mathematical induction</td>
<td>AT3 DRAFT DUE Tuesday 28 March</td>
</tr>
</tbody>
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**Public Holidays:** Thursday 26th January (Australia Day), Friday 14th April (Good Friday)

**School Holidays:** Saturday 1st April – Monday 17th April
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| 1    | 18 Apr - 21 Apr | Easter Monday Public Holiday (Mon 17th) | Integral calculus & numerical methods (Chapter 4)  
- Approximating small change, error of approximation  
- Related rates                  | Contact teacher/ attend lessons |
| 2    | 24 Apr - 28 Apr | ANZAC Day Public Holiday (Tue 25th) | Integral calculus & numerical methods (cont.)  
- Trapezoidal rule, Simpson’s rule & applications  
- Introduction to integration             | GOAL SETTING REVIEW  
Contact teacher/ attend lessons |
| 3    | 1 May - 5 May  | Labour Day Public Holiday (Mon 1st) | Integral calculus & numerical methods (cont.)  
- Integration by substitution, linear substitution  
- Trigonometric identities  
BSDE Cross Country (Fri 5th) | AT3 FINAL DUE  
Tuesday 2 May  
Contact teacher/ attend lessons |
| 4    | 8 May - 12 May | Senior Camp (Mon 8th – Fri 12th) | Integral calculus & numerical methods (cont.)  
- Review and consolidate                              | Contact teacher/ attend lessons |
| 5    | 15 May - 19 May | Integral calculus & numerical methods (cont.)  
- Partial fractions, integration by parts  
- Applications of integrals  
QCS Workshop (Thu 18th)  | Contact teacher/ attend lessons |
| 6    | 22 May - 26 May | Dynamics I (Chapter 11) | - Displacement, velocity, acceleration  
- Vertical motion under gravity                          | Contact teacher/ attend lessons |
| 7    | 29 May - 2 Jun | Dynamics I (cont.) | - Projectile motion  
Revision for ST5 (Topics 14-16)  
Year 12 Exam Block (Thu 1st – Wed 7th)  | Diagnostic Test 5  
(submit by Tue 30 May) |
| 8    | 5 Jun - 9 Jun  | Year 12 Exam Block (Thu 1st – Wed 7th) | **Supervised Summative Test ST5 (Topics 14-16)**  
Year 12 QCS Practice (Thu 8th – Fri 9th)  | ST5 EXAM DUE  
Wednesday 7 June  
Contact teacher/ attend lessons |
| 9    | 12 Jun - 16 Jun | Advanced periodic functions (Chapter 7) | - Circular/reciprocal functions, Pythagorean exact values  
- Graphs of reciprocal functions                        | Contact teacher/ attend lessons |
| 10   | 19 Jun - 23 Jun | Advanced periodic functions (cont.) | - Addition identities: sin (x ± y), cos (x ± y), tan (x ± y)  
- Werner (factorisation) identities  | Contact teacher/ attend lessons |

**Public Holidays:** Monday 25th April (Anzac Day), Monday 1st May (Labour Day)

**School Holidays:** Saturday 24th June – Sunday 9th July
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| 1    | 10 Jul - 14 Jul | Topic 17 (cont.) | Advanced periodic functions (cont.)  
- Simpson (half-sum/half-difference) identities  
- Applications of periodic functions | Contact teacher/attend lessons |
| 2    | 17 Jul - 21 Jul | Differential equations (Chapter 5)  
- Related rates (review)  
- First order differential equations (types I & II) | AT4 DRAFT DUE  
Monday 17 July |
| 3    | 24 Jul - 28 Jul | Differential equations (cont.)  
- First order differential equations (type III)  
- Setting up & solving differential equations | GOAL SETTING DUE  
Contact teacher/attend lessons |
| 4    | 31 Jul - 4 Aug  | Differential equations (cont.)  
- Applications of differential equations | Contact teacher/attend lessons |
| 5    | 7 Aug - 11 Aug  | Dynamics II (Chapter 12)  
- Position, velocity & acceleration (review)  
- Differential equations applied to rectilinear motion | AT4 FINAL DUE  
Monday 7 August |
| 6    | 14 Aug - 18 Aug | Revision & Exam | Revision for ST6 (Topics 17-18)  
- Check BlackBoard for Revision Sheet  
Brisbane EKKA Holiday (Wed 16th) | Diagnostic Test 6  
(submit by Tue 15 Aug) |
| 7    | 21 Aug - 25 Aug | Revision for ST6 (cont.) | Year 12 Exam Block (Wed 23rd – Fri 25th)  
Supervised Summative Test ST6 (Topics 17-18) | ST6 EXAM DUE  
Friday 25 August |
| 8    | 28 Aug - 1 Sep  | QCS | Year 12 QCS Workshop (Mon 28th)  
Year 12 QCS (Tue 29th – Wed 30th) | Contact teacher/attend lessons |
| 9    | 4 Sep - 8 Sep   | Dynamics II (cont.)  
- Angular velocity and circular motion  
- Newton’s laws of motion, centripetal force | Contact teacher/attend lessons |
| 10   | 11 Sep - 15 Sep | Dynamics II (cont.)  
- The conical pendulum  
- Banked tracks | Contact teacher/attend lessons |

Public Holiday: Wednesday 16th August (Royal QLD Show, Brisbane)
School Holidays: Saturday 16th September – Monday 2nd October
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<tr>
<td>1</td>
<td>3 Oct - 6 Oct</td>
<td>Topic 20</td>
<td>Queen’s Birthday Public Holiday (Mon 2nd)</td>
<td>Contact teacher/ attend lessons</td>
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<td>Advanced exponential functions (Chapter 8) Euler’s formula and applications</td>
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<tr>
<td>2</td>
<td>9 Oct - 13 Oct</td>
<td>Topic 20</td>
<td>Advanced exponential functions (cont.) - Simple harmonic motion - Damped functions and modelling</td>
<td>Contact teacher/ attend lessons</td>
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<tr>
<td>3</td>
<td>16 Oct - 20 Oct</td>
<td>Topic 20</td>
<td>Advanced exponential functions (cont.) - The logistic model for population growth</td>
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<td>Revision for ST7 (Topics 19-20)</td>
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<td><strong>Supervised Summative Test ST7 (Topics 19-20)</strong></td>
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<td>5</td>
<td>30 Oct - 3 Nov</td>
<td>Wrap-up</td>
<td>Course wrap-up - Assessment/results feedback</td>
<td>Contact teacher/ attend lessons</td>
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<tr>
<td>6</td>
<td>6 Nov - 10 Nov</td>
<td></td>
<td>Course wrap-up - Assessment/results feedback</td>
<td>Contact teacher/ attend lessons</td>
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<tr>
<td>7</td>
<td>13 Nov - 17 Nov</td>
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<td>Last Day for Year 12 (Fri 17th)</td>
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**Public Holidays:** Monday 2nd October (Queen’s Birthday)  
**Student Free Day:** Monday 16th October  
**School Holidays:** Saturday 9th December – Sunday 21st January 2018