**Sample Course Outline**

mathematics essential

General Year 11

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# Sample course outline

Mathematics Essential–General Year 11

## Unit 1 and Unit 2

### Semester 1 – Unit 1

| **Week** | **Syllabus content** |
| --- | --- |
|  | Throughout Unit 1, students apply the mathematical thinking process to real-world problems relating to the topic content.  Students:   * interpret the task and gather the key information * identify the mathematics which could help to complete the task * analyse information and data from a variety of sources * apply existing mathematical knowledge and strategies to obtain a solution * verify the reasonableness of the solution * communicate findings in a systematic and concise manner. |
| 1–5 | **Topic 1.1: Basic calculations, percentages and rates**   * Checking and making sense of all calculations * Basic calculations * Percentages * Rates (no inverse proportion)   1.1.1 – 1.1.18 |
| 6–7 | **Topic 1.2: Using formulas for practical purposes**  1.2.1–1.2.2 |
| 8–13 | **Topic 1.3: Measurement**   * Linear Measure * Area measure * Mass * Volume and capacity * Units of energy   1.3.1–1.3.18 |
| 14–16 | **Topic 1.4: Graphs**   * Reading and interpreting graphs * Drawing graphs   1.4.1–1.4.6 |

### Semester 2 – Unit 2

| **Week** | **Syllabus content** |
| --- | --- |
|  | For topic 2.1 students apply the statistical investigation process to real-world tasks relating to the topic content.  Students:   * clarify the problem and pose one or more questions that can be answered with data * design and implement a plan to collect or obtain appropriate data * select and apply appropriate graphical or numerical techniques to analyse the data * interpret the results of this analysis and relate the interpretation to the original question * communicate findings in a systematic and concise manner. |
| 1–5 | **Topic 2.1: Representing and comparing data**   * Classifying data * Data presentation and interpretation * Summarising and interpreting data * Comparing data sets   2.1.1–2.1.17 |
|  | Throughout topics 2.2, 2.3 and 2.4, students apply the mathematical thinking process to real-world problems relating to the topic content.  Students:   * interpret the task and gather the key information * identify the mathematics which could help to complete the task * analyse information and data from a variety of sources * apply existing mathematical knowledge and strategies to obtain a solution * verify the reasonableness of the solution * communicate findings in a systematic and concise manner. |
| 6–7 | **Topic 2.2: Percentages**   * Percentage calculations * Applications of percentages   2.2.1–2.2.4 |
| 8–10 | **Topic 2.3: Rates and ratios**   * Ratios * Rates   2.3.1–2.3.12 |
| 11–16 | **Topic 2.4: Time and Motion**   * Time * Distance and length * Speed   2.4.1–2.4.14 |