**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 |