

**Queen Margaret College**  
**Year 13 Physics Programme 2019**  
**Level 8 of the New Zealand Curriculum**

| Standard Number | Achievement Standard Title   | Credits | Internal / External | Proposed assessment date |
|-----------------|--|---------|---------------------|--------------------------|
| AS91521, 3.1    | Carry out a practical investigation to test a physics theory relating to two variables in a non-linear relationship. | 4       | Internal            | Wednesday, 6 June        |
| AS91523, 3.3    | Demonstrate understanding of wave systems  | 4       | External            | End of year examination  |
| AS91524, 3.4    | Demonstrate understanding of mechanical systems  | 6       | External            | End of year examination  |
| AS91526, 3.6    | Demonstrate understanding of electrical systems  | 6       | External            | End of year examination  |

- Assessment dates may be subject to slight variation

### Course details

Year 13 Physics builds on the knowledge developed in Year 12 and aims to further develop understanding of the principles of Physics. In the Waves unit, students study the behaviour of waves, interference patterns and the Doppler Effect. The Electricity unit allows students to develop their understanding of Kirchhoff's laws, alternating current, capacitance and induction. In Mechanics, rotational kinematics, centre of mass, momentum, gravity and simple harmonic motion are all investigated. This is supplemented with a practical examination carried out when the students complete an experiment and deduce an equation that describes their findings with a comprehensive error analysis.

### Course Information

- Students are issued with a workbook, which is charged to the student's account
- 2019 teacher is Mr Paul Wilson

### Homework expectations

Your daughter should be learning at home for a total of at least 15 hours per week, across all subjects.

To achieve at a high level in this subject, students are expected to complete some homework during the week. Homework might include:

- Completing any unfinished classwork.
- Completing workbook exercises.
- Going over classwork to identify any gaps in understanding which should be raised with the teacher in the following lesson.