

Group 4 Physics

Course Description

Both SL and HL physics share the study of eight core concepts (measurements and uncertainties, mechanics, thermal physics, waves, electricity and magnetism, circular motion and gravity, atomic and nuclear physics and energy production) plus an additional unit of astrophysics. The HL students will further investigate wave phenomena, fields, electric induction and quantum physics. Over the two years will complete a series of labs pertaining to each concept, an individual independent internally assessed investigation of a concept of their choosing, and the group 4 project. The group 4 project is a collaborative activity where students from different science disciplines work together. It allows for concepts and perceptions from across disciplines to be shared while appreciating the environmental, social and ethical implications of science and technology. At the conclusion of the course, all students will sit three papers (multiple choice, concept short answer and practical based short answer).

5 important skills you will need to develop in this class:

1. Using models to explain abstract concepts.
2. Manipulating mathematical relationships.
3. Persistence and patience to develop abstract understandings.
4. Experimental design and exploration skills.
5. Analysing experimental data.

What is the difference between HL and SL?

Group 4 students at standard level (SL) and higher level (HL) undertake a common core syllabus, an internal assessment and have some overlapping elements in the option studied.

While the content, skills and activities of group 4 science subjects are similar to students at both SL and HL, students at HL are required to study some topics in greater depth.

The primary distinction between SL and HL is there is more detail and conceptual knowledge required in HL.