

### What is Physics?

Physics is a fundamental science that endeavours to explain all the natural phenomena that occur in the universe. Physics has helped unlock the mysteries of the universe and provides the foundation of understanding upon which modern technologies and all other sciences are based. Students will use qualitative and quantitative models and theories to visualise, explain and predict physical phenomena.

### How will Physics help me in the future?

In this course, students gather, analyse and interpret primary and secondary data to investigate a range of phenomena and technologies using some of the most important models, laws and theories of physics. Studying physics will enable students to become citizens who are better informed about the world around them and who have the critical skills to evaluate and make evidence-based decisions about current scientific issues.

### What careers can Physics lead to?

Physics can prepare students for a range of careers, including those in engineering, medicine, data and systems analysis, technology, aviation and astronomy.

### What content will I study in Year 11 and Year 12?

Year 11	
<b>Physics ATAR Unit 1:</b> Students investigate energy production by considering heating processes, radioactivity and nuclear reactions, and investigate energy transfer and transformations in electrical circuits.	<b>Physics ATAR Unit 2:</b> Students describe, explain and predict linear motion, and investigate the application of wave models to sound phenomena.
Year 12	
<b>Physics ATAR Unit 3:</b> Students investigate models of motion in gravitational, electric and magnetic fields to explain how forces act at a distance.	<b>Physics ATAR Unit 4:</b> Students use the theory of electromagnetism to explain the production and propagation of electromagnetic waves and investigate how shortcomings in existing theories led to the development of the quantum theory, the Special Theory of Relativity and the Standard Model of particle physics.

### What are the pre-requisites?

'B' grade in Year 10 Science and 'B' grade in Year 10 Mathematics.

## LEARN MORE

**Visit:** <https://senior-secondary.scsa.wa.edu.au/syllabus-and-support-materials/science/physics>

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