

*The Senior Physics program offered at Northpine Christian College provides varied opportunities for all students to be immersed in both practical and contextual aspects of Physics. The study of Physics provides opportunities for students to engage with the classical and modern understandings of the universe. Students will also learn valuable skills required for scientific investigation.*

### **Curriculum Overview**

Northpine understands the importance of providing opportunities for students to develop a practical and coherent approach to Physics. The Science Department's aim is to enable students to become better informed about the world around them and to develop critical skills to evaluate and make evidence-based decisions about current scientific issues. This subject will also provide a foundation in physics knowledge, understanding and skills for those students who wish to pursue tertiary study in science, engineering, medicine and technology.

Northpine is committed to providing every student with appropriate and diverse learning experiences that address the following syllabus objectives of the Physics course.

- Describe and explain scientific concepts, theories, models and systems and their limitations.
- Apply understanding of scientific concepts, theories, models and systems within their limitations.
- Analyse and interpret evidence.
- Investigate phenomena.
- Evaluate processes, claims and conclusions.
- Communicate understandings, findings, arguments and conclusions.

## Course focus

Physics is a key part of science and technology that deals with how and why things behave as they do. The foundation of this course are the concepts of Energy, Motion, Gravitational and Electromagnetic Fields and Modern Physics Theories.

The four units of study over the two-year course are: thermal, nuclear and electrical physics; linear motion and waves, gravity and electromagnetism, revolutions in modern physics.

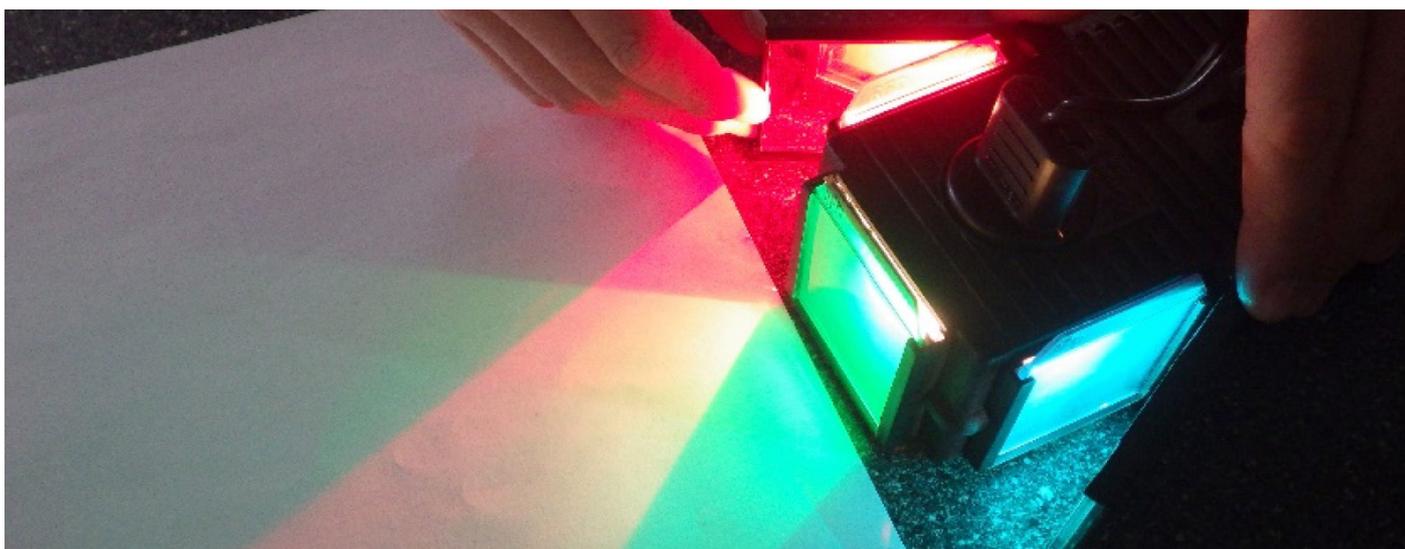
The Senior Physics Course of Northpine Christian College is a 2 year course that concludes at the end of Year 12.

### Year 11 Topics

- Heating processes
- Ionising radiation and nuclear reactions
- Electrical circuits
- Linear motion and force
- Waves

### Year 12 Topics

- Gravity and motion
- Electromagnetism
- Special relativity
- Quantum theory
- The Standard Model



### Career Opportunities

Physics is useful for students wanting to enter the fields of Science, Engineering, Teaching, Industry and Research, Healthcare, Medicine, Military strategist, Finance, Aviation and Software development.

### Enquiries

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