PHYSICS

Physics provides opportunities for students to engage with the classical and modern understandings of the universe.

In Year 11 and 12, students learn about:

- Fundamental concepts of thermodynamics, electricity and nuclear processes
- Concepts and theories that predict and describe the linear motion of objects. They will explore how scientists explain some phenomena using an understanding of waves
- The concept of gravitational and electromagnetic fields, and the relevant forces associated with them
- Modern physics theories and models that, despite being counterintuitive, are fundamental to our understanding of many common observable phenomena

Physics aims to develop students':

- Appreciation of the wonder of physics and the significant contribution physics has made to contemporary society
- Understanding that diverse natural phenomena may be explained, analysed and predicted using concepts, models and theories that provide a reliable basis for action
- Understanding of the ways in which matter and energy interact in physical systems across a range of scales

- Understanding of the ways in which models and theories are refined, and new models and theories are developed in physics
- How physics knowledge is used in a wide range of contexts and informs personal, local and global issues
- Investigative skills, including the design and conduct of investigations to explore phenomena and solve problems, the collection and analysis of qualitative and quantitative data, and the interpretation of evidence
- Ability to use accurate and precise measurement, valid and reliable evidence, and skepticism and intellectual rigour to evaluate claims
- Ability to communicate physics understanding, findings, arguments and conclusions using appropriate representations, modes and genres.

Career Opportunities:

- Accelerator Operator
- Applications Engineer
- Data Analyst
- Design Engineer
- Physics Teacher
- IT Consultant
- Lab Technician
- Laser Engineer/Optical Engineer
- Research Associate
- IT Developer/Systems Analyst