



Physics

What is Physics?

Physics is a dynamic and practical scientific discipline which involves both “hands on” and theoretical approaches to studying the ever changing physical world around us.

Why study Physics?

If you are interested in the how and why of the physical world about you, enjoy practical exercises and are competent in mathematical calculations, this is the subject for you. It is an essential subject for students wishing to go on to careers in some trades, Applied Sciences and Engineering.

Course content of Physics

The Course is divided into 4 sections.

Motion in 2-D

- Projectiles, Circular Motion, Gravity & Satellites and Momentum

Electricity & Magnetism

- Electrical & Magnetic Fields and the motion of charged particles in these fields

Light & Matter

- Electromagnetic Waves, Interference of Light, Photons and Matter Waves

Atoms and Nuclei

- The Atomic Structure, the Nucleus, Radioactivity and Nuclear Fission & Fusion

Assessment Components

Each semester the students undertake at least 4 summative assessment tasks which include practical exercises, research assignments, tests and an exam.

Assessment in Physics consists of the following components weighted as shown:

School Based Component: 70%

- Investigations Folio 40%
 - Practical Investigations
 - Issue Investigations
- Skills and Application Tasks 30%
 - Exams, Tests & Homework Assignments

Externally Moderated Component: 30%

- Examination

Learning Requirements of the Course

The learning requirements summarise the knowledge, skills, and understanding that students are expected to develop and demonstrate through their learning.

In this subject, students are expected to:

1. identify and formulate questions, hypotheses, concepts, and purposes that guide investigations in physics
2. design and conduct collaborative and individual investigations in physics using appropriate apparatus and safe working practices and by observing, recording, and interpreting the phenomena of physics
3. represent, analyse, interpret, and evaluate investigations in physics through the use of technology and numeracy skills
4. select, analyse, and critically evaluate the evidence of physics from different sources, and present informed conclusions and decisions on contemporary physics applications
5. communicate knowledge and understanding of the concepts and information of physics using appropriate physics terms and conventions
6. demonstrate and apply knowledge and understanding of physics to a range of applications and problems.

Physics continued

Future Pathways in Physics

Physics provides a pathway to further study in tertiary institutions, including the following nationally accredited training packages:

- Aeroskills
- Automotive Industry Retail Service and Repair
- Civil Construction
- Electrotechnology Industry
- General Construction
- Metals and Engineering Industry

Physics also provides a pathway to a number of university courses, and associated careers in areas such as:

- Applied Science
- Architecture
- Computing
- Dentistry
- Many Engineering Disciplines
- Medicine & Health Sciences
- Physiotherapy
- Many other Sciences

Required Text(s) for Physics

Physics - Key Ideas, SACE Stage 2 Books 1 & 2
(Essentials series – Adelaide Tuition Centre)

SASTA Physics Study Guide (2011 Edition preferably)

What are the prerequisites?

B grade in Year 11 Physics, as well as, a demonstrated competency in Year 11 Algebraic Mathematics.



TRINITY COLLEGE
Senior

Contact Details

For more information about studying Year 12 at Trinity College Senior, please contact the Head of Year 12 on 8523 8705 or visit: www.trinity.sa.edu.au/curriculum/index.htm

Further Information

More information about SACE may be obtained from the SACE Board of South Australia webpage at: www.sace.sa.edu.au