

Engineering Studies

The Engineering Studies course is directed towards the development and application of mathematical, scientific and technological skills and their integration with business and management. It provides students with skills, knowledge and understanding associated with a study of engineering, its practices and associated methodologies. The subject promotes environmental, economic and global awareness, problem-solving ability, and engagement with information technology, self-directed learning, communication, management and skills in working as part of a team.

Successful Engineering Studies students enjoy learning how industrial products and systems work and how to generate solutions to a wide variety of engineering problems.

The Engineering Studies course comprises a series of focus areas which in turn provide a context for understanding various engineering principles.

The Preliminary Course

- Engineering Fundamentals
- Engineered Products
- Braking Systems
- Biomedical Engineering

The HSC Course

- Civil Structures
- Personal and Public Transport
- Aeronautical Engineering
- Telecommunications Engineering

Structuring the course with these distinct modules allows students to examine a diverse range of engineered products such as lawn mowers, motor vehicles, communication devices, aircraft, bridges and biomedical. Students are also exposed to the different forms of practice which underpin the various strands of professional engineering.

Engineering continues to evolve into a fascinating discipline offering significant opportunities for both young women and men to work with traditional and developing technologies. Engineering Studies provides a good foundation for many forms of technical careers and equips students with the skills to make informed choices within the wide field of engineering.

Students are advised that they should consider taking Mathematics or Mathematics Extension, as well as Physics, in order to better grasp the concepts in the Engineering Studies course. Failure to take up such subjects may limit the ability of a student to understand fully what is required in the Engineering Studies course.

For more information on Engineering Studies visit the NESA website at:

<https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/technologies/engineering-studies-syllabus>