

## Course: **ENGINEERING STUDIES**

2 units for each of Preliminary and HSC Board Developed Course



Exclusions: Nil

### Course Description:

The Engineering Studies course is designed as an introduction to engineering as a career. It introduces students to many of the topics and skills required in the first year of study of an engineering degree. Engineering Studies has strong links to the HSC Physics course. The Engineering Studies Preliminary course introduces students to engineering fundamentals of force, energy and power, engineered products, braking systems and takes a look at the Bio- Medical engineering specialisation. The HSC Course concentrates on the construction and analysis of Civil Structures, Personal and Public Transport, Aeronautical Engineering and Telecommunications Engineering. The course is deliberately practical in nature, with students learning key concepts in engineering historical influences, mechanics, materials and communication techniques through experimentation and project work. Assessment is chiefly project-based and students learn to work individually and cooperatively on their projects. Successful completion of this course puts students in a strong position to succeed in their future engineering studies at University.

### Preliminary Course

Task number	Task 1	Task 2	Task 3	
Nature of task	Fundamentals Analysis: Bridge Design Project	Braking Systems Research : Sub Skin Test	Bio Med Engineering Report*	
Outcomes assessed	P1.2, P2.1, P3.1, P3.3, P5.2, P6.1, P6.2	P2.1, P3.1, P3.2, P4.1, P4.2, P6.2	P1.1, P2.2, P3.2, P3.3, P4.3, P5.2	
<b>Components</b>				<b>Weighting %</b>
Knowledge and understanding of course content	10	10	40	<b>60</b>
Knowledge and skills in research, problem solving and communication related to engineering practice	20	20		<b>40</b>
<b>Total %</b>	<b>30</b>	<b>30</b>	<b>40</b>	<b>100</b>

### HSC Course

Task number	Task 1	Task 2	Task 3	Task 4	
Nature of tasks	Civil Engineering Solution and Report*	Topic Test Transport	Materials Modification Research	Trial HSC Examination	
Outcomes assessed	H2.1, H4.1, H4.2	H3.1, H3.3, H4.3, H6.1	H4.3, H5.1, H5.2, H6.1	H4.3, H5.1, H5.2, H6.1	
<b>Component</b>					<b>Weighting %</b>
Knowledge and understanding of course content	10	15	15	20	<b>60</b>
Knowledge and skills in research, problem solving and communication related to engineering practice	10	15	5	10	<b>40</b>
<b>Total %</b>	<b>20</b>	<b>30</b>	<b>20</b>	<b>30</b>	<b>100</b>