




You will develop and extend your understanding of how the physical world is chemically constructed, the interaction between human activities and the environment, and the use that human beings make of the planet's resources. You will explore examples of how scientific understanding is dynamic and develops with new evidence, which may involve the application of new technologies. You will study monitoring the environment, managing chemical processes, organic and biological chemistry and managing resources.

SACE Stage 2
20 Credits

 Engage <i>Skills</i>	 Extend <i>Knowledge</i>		 Enrich <i>Experiences</i>
<ul style="list-style-type: none"> Deconstruct a problem to determine and justify the most appropriate method for investigation. Design investigations. Conduct investigations. Represent results of investigations in appropriate ways. Select, use, and interpret appropriate representations. Analyse data. Identify sources of uncertainty. Evaluate reliability, accuracy, and validity of results, by discussing factors. Select and use evidence and scientific understanding to make and justify conclusions. Recognise the limitations of conclusions. Communicate to specific audiences and for specific purposes. 	<p>Monitoring the environment Global warming and climate change Photochemical smog Volumetric analysis Chromatography Atomic spectroscopy</p> <p>Managing chemical processes Rates of reactions Equilibrium and yield Optimising production</p> <p>Organic and biological chemistry Introduction Alcohols Aldehydes and ketones</p>	<p>Carbohydrates Carboxylic acids Amines Esters Amides Triglycerides Proteins</p> <p>Managing resources Energy Water Soil Materials</p>	<ul style="list-style-type: none"> Uni SA STEM opportunities - STEM Girls on Campus – others as they arise via STEM Girls Academy Science Olympiads (optional) National Youth Science Forum (optional) RACI Titration competition STEM Tour (optional – offered every two years)

Assessments/Outcomes

Two practical investigations, one investigation with a focus on science as a human endeavour, four skills and applications tasks and one externally assessed examination.

Pathways

Career Pathways: Chemical engineer, Dietitian, Environmental scientist, Forensic scientist, Medicine and Medical Research, Oenologist (wine maker), Patent examiner, Pathologist, Pharmacy, Veterinarian and Veterinary Science