# Sample Scope and Sequence: Chemistry – Year 12

***Sample for implementation for Year 12 from Term 4, 2018***

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| **Term 4** | **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** | **Week 9** | **Week 10** |
| **Module 5: Equilibrium and Acid Reactions**  Students investigate the effects of changes in temperature, concentration of chemicals and pressure on equilibrium systems, and consider that these can be predicted by applying Le Chatelier’s principle. Students make reliable predictions by comparing equilibrium calculations and equilibrium constants to determine whether a combination of two solutions will result in the formation of a precipitate. | | | | | | | | | |
| **Depth Study 1:**  8 hours across Modules 5 and 6 | | | | | | | | | |
| CH11/12-1 CH11/12-4 CH11/12-5 CH11/12-6 CH11/12-7 CH12-12 | | | | | | | | | |

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| **Term 1** | **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** | **Week 9** | **Week 10** |
| **Module 6: Acid/Base Reactions**  Students analyse how and why the definitions of both an acid and a base have changed over time, and how the current definitions characterise the many chemical reactions of acids. The chemistry of acids and bases contributes to industrial contexts and the environment. By investigating the qualitative and quantitative properties of acids and bases, students learn to appreciate the importance of factors such as pH and indicators. | | | | | | | | | |
| CH11/12-1 CH11/12-2 CH11/12-3 CH11/12-5 CH12-13 | | | | | | | | | |

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| **Term 2** | **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** | **Week 9** | **Week 10** |
| **Module 7: Organic Chemistry**  Students examine the principles and applications of chemical synthesis in the field of organic chemistry. Current and future applications of chemistry include techniques to synthesise new substances – including pharmaceuticals, fuels and polymers. Students investigate the many classes of organic compounds and their characteristic chemical reactions. | | | | | | | | | |
| CH11/12-5 CH11/12-6 CH11/12-7 CH12-14 | | | | | | | | | |

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| **Term 3** | **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** | **Week 9** | **Week 10** |
| **Module 8: Applying Chemical Ideas**  Students investigate a range of methods used to identify and measure quantities of chemicals. They process and analyse data involving the identification and quantification of ions present in aqueous solutions. Students deduce or confirm the structure and identity of organic compounds by interpreting data from qualitative tests of chemical reactivity and determining structural information using proton and carbon‑13 nuclear magnetic resonance (NMR) spectroscopy. | | | | | | | | | |
| **Depth Study 2:** 7 hours | | | | | | | | | |
| CH11/12-1 CH11/12-2 CH11/12-3 CH11/12-4 CH11/12-7 CH12-15 | | | | | | | | | |