

<b>Programme description</b>	This course will build on the learning from year 12 and further develop understanding of chemistry as it prepares students for continued science related learning at tertiary level and beyond. <b>21 credits are available.</b> Students will research current scientific ideas and investigate the chemical and physical properties of a variety of substances (including ionic, metallic, molecular and organic compounds). We will also develop an understanding of oxidation/reduction reactions, spectroscopic analysis and equilibria in solutions to help interpret observations.
<b>Content</b>	Topics covered include: Thermochemistry, structure and bonding, Organic compounds, Spectroscopy, Aqueous systems, and Redox reactions
<b>Prerequisites</b>	15+ credits from Level 2 Chemistry <b>including:</b> 2.4 atomic structure, <b>either</b> 2.5 organic <b>or</b> 2.6 aqueous systems, 2.7 redox and 2.2 ions in solution. <i>This is extremely important in chemistry as prior knowledge of these topics is assumed when we build on the concepts learned at level 2.</i> It is strongly recommended that the student has an endorsement from L2 Chemistry as well.
<b>Required</b>	ESA L3 Chemistry learning <a href="#">Workbook</a> (ISBN: 978-1-988548-33-3) by Jan Giffney and Dorothy Kane (essential), access to <a href="#">Continuing Chemistry</a> NCEA L3 (ISBN: 9780947496388) by Anne Wignall and Terry Wales (highly recommended). Access to Google classrooms is essential. Please ensure these resources are sourced early to avoid delays in participating in learning activities.
<b>Assessment</b>	<b>Externals (15 credits):</b> There will be end of topic tests for each external <b>and</b> school exams to assess your ability on 3.4, 3.5, 3.6. These will enable you, your caregivers, and me to track your progress. Periodic requests for completed work will also be made. The results may be used in cases of 'compassionate consideration'. <b>Internals (6 credits):</b> There will be ample opportunities to monitor your understanding and get feedback before the assessment dates, so <b>no reassessments</b> will be available for any internal. It is therefore very important that you get feedback on all work before the assessment.
<b>Contact</b>	John Boer, Whangamata Area School, (09-439-7229), <a href="mailto:johhannesb@whangamata.school.nz">johhannesb@whangamata.school.nz</a>

Standards	Description	When Assessed	Type	Credit value
<a href="#">AS91390v2</a>	3.4 Demonstrate understanding of thermochemical principles and the properties of particles and substances	Week 6 term 1 20 March	E	5
<a href="#">AS91393v2</a>	3.7 Demonstrate understanding of oxidation-reduction processes	Week 10 term 1 9 April	I	3
<a href="#">AS91391v2</a>	3.5 Demonstrate understanding of the properties of organic compounds.	Week 6 term 2 4 June	E	5
<a href="#">AS91388v2</a>	3.2 Demonstrate understanding of spectroscopic data in chemistry	Week 10 term 2 2 July	I	3
<a href="#">AS91392v2</a>	3.6 Demonstrate understanding of equilibrium principles in aqueous systems	Week 7 term 3 9 September	E	5

I = Internally Assessed | E = Externally Assessed