

# CHEM30017 Specialised Topics in Chemistry A

<b>Credit Points:</b>	12.50																																	
<b>Level:</b>	3 (Undergraduate)																																	
<b>Dates &amp; Locations:</b>	2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.																																	
<b>Time Commitment:</b>	Contact Hours: Three one-hour lectures per week; up to four one-hour tutorials per module. Total 48 hours. Total Time Commitment: Estimated total time commitment of 120 hours																																	
<b>Prerequisites:</b>	<p>One of</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CHEM20021 Physical Chemistry 2</td> <td>Year Long</td> <td>12.50</td> </tr> <tr> <td>CHEM20022 Organic Chemistry 2</td> <td>Year Long</td> <td>12.50</td> </tr> <tr> <td>CHEM20023 Inorganic Chemistry 2</td> <td>Year Long</td> <td>12.50</td> </tr> <tr> <td>CHEM20014 Organic and Physical Chemistry 2</td> <td>Year Long</td> <td>12.50</td> </tr> <tr> <td>CHEM20024 Organic and Inorganic Chemistry 2</td> <td>Year Long</td> <td>12.50</td> </tr> <tr> <td>CHEM20025 Physical and Inorganic Chemistry 2</td> <td>Year Long</td> <td>12.50</td> </tr> <tr> <td>CHEM30016 Reactivity and Mechanism</td> <td>Semester 1</td> <td>12.50</td> </tr> </tbody> </table> <p>(CHEM30016 may also be taken concurrently)</p> <p>Or both of</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CHEM20018 Reactions and Synthesis</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>CHEM20020 Structure and Properties</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table> <p>Or</p> <p>One of</p> <ul style="list-style-type: none"> <li># 610-210 Light, Matter &amp; Chemical Change A (prior to 2009)</li> <li># 610-211 Light, Matter &amp; Chemical Change B (prior to 2009)</li> </ul> <p>Plus one of</p> <ul style="list-style-type: none"> <li># 610-220 Organic Chemistry (prior to 2009)</li> <li># 610-221 Organic &amp; Bio-organic Chemistry (prior to 2009)</li> </ul> <p>Plus one of</p> <ul style="list-style-type: none"> <li># 610-240 Inorganic and Bio-inorganic Chemistry A (prior to 2009)</li> <li># 610-241 Inorganic and Bio-inorganic Chemistry B (prior to 2009)</li> </ul>	Subject	Study Period Commencement:	Credit Points:	CHEM20021 Physical Chemistry 2	Year Long	12.50	CHEM20022 Organic Chemistry 2	Year Long	12.50	CHEM20023 Inorganic Chemistry 2	Year Long	12.50	CHEM20014 Organic and Physical Chemistry 2	Year Long	12.50	CHEM20024 Organic and Inorganic Chemistry 2	Year Long	12.50	CHEM20025 Physical and Inorganic Chemistry 2	Year Long	12.50	CHEM30016 Reactivity and Mechanism	Semester 1	12.50	Subject	Study Period Commencement:	Credit Points:	CHEM20018 Reactions and Synthesis	Semester 1	12.50	CHEM20020 Structure and Properties	Semester 2	12.50
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<b>Corequisites:</b>	None																																	
<b>Recommended Background Knowledge:</b>	None																																	
<b>Non Allowed Subjects:</b>	None																																	

<b>Core Participation Requirements:</b>	For the purposes of considering applications for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005) and Students Experiencing Academic Disadvantage Policy, this subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the Subject Coordinator and the Disability Liaison Unit. Hhttp://www.services.unimelb.edu.au/disability/
<b>Coordinator:</b>	Assoc Prof Uta Wille
<b>Contact:</b>	Director of Third Year Studies <b>Email: <a href="mailto:third-year-director@chemistry.unimelb.edu.au">third-year-director@chemistry.unimelb.edu.au</a> (mailto:third-year-director@chemistry.unimelb.edu.au)</b>
<b>Subject Overview:</b>	This subject provides a series of specialised modules in the areas of organic, inorganic and physical chemistry. Students choose three modules. Each module consists of 12 lectures. A selection of the following topics will be available: <ol style="list-style-type: none"> <li>1 Bio-Organic Chemistry,</li> <li>2 Spectroscopy – Identification of Organic Molecules,</li> <li>3 Heterocyclic Chemistry,</li> <li>4 Colloid and Surface Science,</li> <li>5 Interfacial Reaction Kinetics,</li> <li>6 Polymer Chemistry,</li> <li>7 Organometallic Chemistry and Catalysis,</li> <li>8 Metal chemistry: Principles and applications</li> </ol>
<b>Objectives:</b>	Students should develop an advanced perspective on theory and applications across the disciplines of Chemistry. They should obtain problem-solving skills and training in chemistry sufficient to allow them to pursue careers in applied chemistry and chemicals-based research. In the latter case, students should obtain the chemical knowledge needed to be able to complete successfully the honours/masters coursework.
<b>Assessment:</b>	To address the diversity of material taught in the various modules, there will be several options for assessment. The assessment for the specific module will be announced in the first lecture. Option 1: One one-hour end of semester exam (80%) and one to two assignments conducted during the module (20%). Option 2: Several assignments (written and/or oral) conducted during the module (100%).
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject potentially can be taken as a breadth subject component for the following courses: <ul style="list-style-type: none"> <li># <b>Bachelor of Commerce</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-COM">https://handbook.unimelb.edu.au/view/2011/B-COM</a>)</li> <li># <b>Bachelor of Environments</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-ENVS">https://handbook.unimelb.edu.au/view/2011/B-ENVS</a>)</li> <li># <b>Bachelor of Music</b> (<a href="https://handbook.unimelb.edu.au/view/2011/B-MUS">https://handbook.unimelb.edu.au/view/2011/B-MUS</a>)</li> </ul> You should visit <b>learn more about breadth subjects</b> ( <a href="http://breadth.unimelb.edu.au/breadth/info/index.html">http://breadth.unimelb.edu.au/breadth/info/index.html</a> ) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	This subject will provide opportunities to enhance the following generic skills: <ul style="list-style-type: none"> <li># the ability to comprehend complex concepts and to communicate this understanding;</li> <li># the ability to analyze and solve abstract and technical problems;</li> <li># an awareness of advanced technologies in the discipline of chemistry;</li> <li># the ability to think and reason logically;</li> <li># the ability to think critically and independently.</li> </ul>

<b>Notes:</b>	This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BAsC or a combined BSc course.
<b>Related Course(s):</b>	Bachelor of Science
<b>Related Majors/Minors/ Specialisations:</b>	Chemical Biotechnology (specialisation of Biotechnology major) Chemistry (specialisation of Chemistry major) Science credit subjects* for pre-2008 BSc, BAsC and combined degree science courses