

CHEM10004 Chemistry 2

Credit Points:	12.50								
Level:	1 (Undergraduate)								
Dates & Locations:	This subject is not offered in 2014. Lectures, practicals, tutorials/workshops, independent learning tasks, computer-aided learning.								
Time Commitment:	Contact Hours: Summer semester: 5 x one hour lectures per week, 6 x three-hour practical activities per week, 2 x one-hour tutorial/workshop sessions per week, 6 hours of computer aided learning during semester, 8 hours of independent learning tasks during semester. Semester 2: 3 x one hour lectures per week, 6 x 3 hours of practical activities during semester, 1 x one-hour tutorial/workshop sessions per week, 6 hours of computer aided learning during semester, 8 hours of independent learning tasks during semester. Total Time Commitment: Estimated total time commitment of 120 hours.								
Prerequisites:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>CHEM10003 Chemistry 1</td> <td>Semester 1, Semester 2</td> <td>12.50</td> </tr> </tbody> </table>			Subject	Study Period Commencement:	Credit Points:	CHEM10003 Chemistry 1	Semester 1, Semester 2	12.50
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CHEM10003 Chemistry 1	Semester 1, Semester 2	12.50							
Corequisites:	None								
Recommended Background Knowledge:	None								
Non Allowed Subjects:	None								
Core Participation Requirements:	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/								
Contact:	first-year-director@chemistry.unimelb.edu.au								
Subject Overview:	The subject provides an introduction to organic acids and bases; nucleophilic substitution reactions; elimination reactions; addition reactions; electrophilic aromatic substitution reactions; nucleophilic addition reactions; organic redox reactions; chemical kinetics; elementary quantum mechanics, atomic spectra and atomic structure; redox reactions and electrochemistry; and transition metal and coordination chemistry.								
Learning Outcomes:	<p>The aim of the subject is to provide students with an understanding of the reactivity of organic molecules; the nature of chemical change; the structure of the atom; electrochemical processes and the structure and reactivity of metal compounds.</p> <p>In the practical component, students should develop basic laboratory skills (observation, analytical techniques, report writing); oral communication skills; independent learning skills; an appreciation of the health and safety issues associated with the safe handling and disposal of laboratory chemicals.</p>								
Assessment:	Three equally weighted 30 minute on-line tests conducted during the semester (6%) Ongoing assessment of practical work throughout the semester (20%) A three hour written examination in the examination period (74%) Satisfactory completion of practical work is necessary to pass the subject. Independent learning tasks need to be completed in order to pass the subject.								
Prescribed Texts:	A. Burrows, J. Holman, A. Parsons, G. Pilling and G. Price, Chemistry3 2nd Ed, Oxford University Press, 2013.								
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses:								

	<p># Bachelor of Arts (https://handbook.unimelb.edu.au/view/2014/B-ARTS)</p> <p># Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2014/B-COM)</p> <p># Bachelor of Environments (https://handbook.unimelb.edu.au/view/2014/B-ENVS)</p> <p># Bachelor of Music (https://handbook.unimelb.edu.au/view/2014/B-MUS)</p> <p>You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>This subject encompasses particular generic skills so that on completion of this subject students should have developed skills relating to:</p> <ul style="list-style-type: none"> # the organization of work schedules that permit appropriate preparation time for tutorials, practical classes and examinations; # the use of electronic forms of communication; # the utilisation of computer-aided learning activities to enhance understanding; # the performance of basic manipulations with laboratory equipment; # the recording of observations, the analysis of information and the interpretation data within a laboratory setting; # accessing information from the library employing both electronic and traditional means; # working collaboratively with other students; # the use of conceptual models; # problem solving; and # critical thinking.
Notes:	<p>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.</p> <p>Students with a high level of achievement in CHEM10007 Fundamentals of Chemistry may be permitted to enrol in this subject in semester 2 upon successful completion of the computer aided learning modules of CHEM10003 Chemistry 1 during the winter recess.</p> <p>A laboratory coat and safety glasses are required for laboratory activities.</p> <p>It is recommended that students have access to a molecular model kit.</p>
Related Majors/Minors/Specialisations:	<p>B-ENG Chemical Engineering stream</p> <p>B-ENG Chemical and Biomolecular Engineering stream</p> <p>Environmental Engineering Systems major</p> <p>Environmental Science major</p> <p>Environments Discipline subjects</p> <p>Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses</p> <p>Science-credited subjects - new generation B-SCI and B-ENG.</p>
Related Breadth Track(s):	Environmental Chemistry