CHEM20019 Practical Chemistry 2

Credit Points:	12.5
Level:	2 (Undergraduate)
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: A total of 21 three-hour practical classes at a rate of no more than 2 x three hour practical classes per week; 2 x one hour lectures per week for four weeks; 1 x one hour tutorial per week for two weeks. Total 73 hours. Total Time Commitment: Estimated total time commitment of 170 hours.
Prerequisites:	**Subject** / **Study Period Commencement:** / **Credit Points:** CHEM20020 Chemistry: Structure and Properties — Semester 2 — 12.50 (May be taken concurrently)
Corequisites:	None
Recommended Background Knowledge:	**Subject** / **Study Period Commencement:** / **Credit Points:** CHEM20018 Chemistry: Reactions and Synthesis — Semester 1 — 12.50
Non Allowed Subjects:	Students who have completed one of the following subjects may not also gain credit for this subject:

Subject	Study Period Commencement:	Credit Points:
CHEM20014 Organic and Physical Chemistry 2	Not offered 2015	12.50
CHEM20021 Physical Chemistry 2	Not offered 2015	12.50
CHEM20022 Organic Chemistry 2	Not offered 2015	12.50
CHEM20023 Inorganic Chemistry 2	Not offered 2015	12.50
CHEM20024 Organic and Inorganic Chemistry 2	Not offered 2015	12.50
CHEM20025 Physical and Inorganic Chemistry 2	Not offered 2015	12.50

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/
Coordinator:	Prof Jonathan White
Contact:	**Email: second-year-lab@chemistry.unimelb.edu.au (mailto:second-year-lab@chemistry.unimelb.edu.au)**
Subject Overview:	This subject allows students to develop skills in the synthesis of different classes of organic and inorganic compounds; analysis of samples with single and multiple components; determination

	of the kinetic and thermodynamic properties of molecules; measurement and interpretation of the spectroscopic and magnetic properties of inorganic and organic compounds. Students will have the opportunity to obtain expertise in the operation of modern analytical and spectroscopic techniques (including chromatography, atomic and molecular spectroscopy, mass spectrometry). The subject consists of eight lectures, two tutorials, and a program of experiments. The lectures and tutorials provide instruction on the basis of different analytical and computational techniques, spectroscopic identification of unknown compounds and cover various aspects of chemical safety, reporting of experimental data, data and error analysis and the use of chemical databases.
Learning Outcomes:	The subject aims to develop students' skills in the synthesis, analysis and characterisation of organic, main group and transition metal compounds. Important aspects of the training provided in this subject include the acquisition of skills needed to conduct chemical synthesis, perform a range of methods used for chemical analysis, interpret the results of spectroscopic or analytical measurements and to know the procedures that allow the safe handling of chemicals and conduct of chemical reactions.
Assessment:	An online test (not exceeding 1.5 hours) due mid-semester based on the material developed in lectures (10%); Ongoing assessment of practical work (of technical competence, reporting and interpretative skills) in the form of 15 short (1 to 3 pages each) and 2 long reports (5 to 6 pages each) due during the semester, one week after completion of the experimental work (90%).
Prescribed Texts:	The laboratory manual for this subject
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2015/B-ARTS)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2015/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2015/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2015/B-MUS)** 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.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Upon completion of this subject, students should have developed the following generic skills: # the ability to use conceptual models to rationalise observations; # data recording and interpretation of scientific observations; # ability to search databases and the scientific literature; # be able to apply procedures for data and error analysis; # ability to write scientific reports; # an understanding and basic operations of modern analytical techniques; # an awareness of safe and diligent laboratory practice, including safe chemical and glassware handling, and proper instrument operation.
Notes:	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. A bound (preferably duplicate) laboratory note book, laboratory coat and safety glasses are required for laboratory activities.
Related Majors/Minors/ Specialisations:	Chemistry Chemistry Environmental Science major Environments Discipline subjects Medicinal Chemistry Medicinal Chemistry Science-credited subjects - new generation B-SCI and B-ENG.

	Selective subjects for B-BMED