610-340 Inorganic Chemistry IIIA

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 1, - Taught on campus. Lectures, tutorials and practical work
Time Commitment:	Contact Hours: 24 lectures (three per week for eight weeks), eight tutorials and 32 hours of practical work Total Time Commitment: 120 hours total time commitment.
Prerequisites:	Either # 610-240 (prior to 2009) Or both of # 610-241 (prior to 2009) # 610-245 (prior to 2009)
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	Credit cannot be gained for both this subject and *Inorganic Chemistry IIIB* or *Inorganic Chemistry Practical III*.
Core Participation Requirements:	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. 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.
Coordinator:	Dr Stephen Best
Subject Overview:	Upon completion of this subject, students should comprehend the main types of reactions of coordination compounds, cluster molecules, organometallic species and biomolecules; understand the reasons for the different types of structures observed for such molecules; have developed a knowledge of the procedures for determination of the structures via spectroscopic and related techniques, and be able to identify the mechanisms of the more important reactions and evaluate the effect that this has on the chemistry. In addition, students should have an appreciation of the electronic structure and photochemistry of metal complexes; the structure of the solid state; and apply concepts developed in relation to small molecule chemistry to catalysis in biological and non-biological systems. The practical course will consist of a number of experiments involving the synthesis and/or chemical and/or instrumental investigations of important classes of main group and transition metal coordination and organometallic compounds. This subject will provide the student with the opportunity to establish/develop the following generic skills: an advanced understanding of the changing knowledge base, problem-solving and critical thinking skills, an ability to evaluate the research and professional literature, a capacity to apply concepts developed in one area to a different context, and the ability to use conceptual models to rationalise observations, a capacity to articulate knowledge and understanding in written presentations, a capacity to manage competing demands on time, including self-directed work.
Objectives:	.
Assessment:	Ongoing assessment of practical work in the form of short reports due during the semester (25%); written assignments not exceeding six pages due during the semester (10%); a 3-hour written examination in the examination period on theory and practical components (65%). This examination will comprise a 2-hour section on theory (57% of total subject assessment) and a 1-

	hour multiple choice section on the practical work (8% of total subject assessment). Satisfactory completion of both theory and practical work is necessary to pass the subject.
Prescribed Texts:	None
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/2009/D09)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2009/F04)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2009/A04)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2009/M05)** 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
Notes:	Students enrolled in the BSc (pre-2008 BSc), BASc or a combined BSc course will receive science credit for the completion of this subject.
Related Course(s):	Bachelor of Biomedical Science
Related Majors/Minors/ Specialisations:	Chemistry