Module Title:	Inorganic Chemistry 2
Academic year:	2009 2010
Credit Value:	6
Pre- requisites:	Inorganic Chemistry 1
Assessment:	Final written exam 50%, Practical Assessment 35% Continuous Assessment 15%.
Aims	The aims of the module are to: Extend the factual knowledge of chemistry with main group and transition metal compounds: ▪ further their understanding of the fundamental principles involved in structure and bonding ▪ appreciate the variation in the different types of structure and bonding exhibited by the chemical elements within inorganic compounds ▪ enhance the factual knowledge of the chemistry within transition metal compounds ▪ develop an appreciation of the chemistry of bioinorganic and organometallic compounds
Module Content	Survey of the Representative & Transition Elements: Typical Ligands and Complexes Co-ordination Chemistry of the Transition Elements Symmetry Introduction to Inorganic Polymer Chemistry: Bio-inorganic chemistry: Organometallic chemistry:

Intended Learning Outcomes: (September 2007)	Having successfully completed this module, the student will be able to: Show an understanding of the types of bonding in inorganic compounds and be able to draw Lewis structures and molecular orbital diagrams for simple compounds Predict the chemical and physical properties of elements and their important compounds based on the position of elements in the periodic table - have a thorough knowledge of the general chemistry of the s and p-block elements Understand the chemistry of the transition metals, in particular their co-ordination chemistry and spectroscopy, and the theoretical explanations for these phenomena. Construct and interpret molecular orbital descriptions of octahedral complexes. Predict the geometry of co-ordination compounds based on their formulae and composition Be able to derive CFSE of octahedral, square planar and tetrahedral geometries. Apply electron-counting rules to the prediction of the stucture/stoichiometry of simple stable organometallic compounds. Be able to apply advanced methods of inorganic quantitative analysis. Balance redox and other equations types and be able to apply them in stoichiometric calculations.
