

1.	Title of the Course	Transition Metals and Coordination Chemistry
2.	Course Number	CY5103
3.	Status of the Course	Core
4.	Structure of Credits	3-0-0-3
5.	Offered To	PG
6.	New Course/Modification to	New
7.	To be Offered by	Department of Chemistry
8.	To take effect from	July 2020
9.	Prerequisite	Nil
10.	Whether approved by the Department	Yes
11.	Course Objective: To impart knowledge on the structural, magnetic, optical and electronic properties of transition metals coordination compounds. To provide knowledge on approaches to design such coordination compounds and hence to exploit their utility for mankind.	
12.	Course Content: General chemistry of the d-block and f-block elements, coordination chemistry of transition elements and their bonding, interpretation of electronic structure and properties and absorption spectra, structure-reactivity correlations, reactivity of coordination complexes including reaction kinetics, magnetic properties of transition metals and lanthanides, electron-transfer reactions, inorganic spectroscopy, introduction to biological inorganic chemistry.	
13.	Text book(s): 1. Atkins P, Overton T, Rourke J, Armstrong F and Weller M, <i>Inorganic Chemistry</i> , Oxford University Press (2010). 2. Housecroft C E and Sharpe A G, <i>Inorganic Chemistry</i> , Pearson Education Limited (2012).	
14.	Reference(s): 1. Cotton F A, Wilkinson G, Murillo C A and Bochmann M, <i>Advanced Inorganic Chemistry</i> , John Wiley & Sons (1999). 2. Douglas B E, McDaniel D H and Alexander J J, <i>Concepts and Models in Inorganic Chemistry</i> , John Wiley & Sons (2001). 3. Figgis B N, and Hitchman M A, <i>Ligand Field Theory and Its Applications</i> , Wiley Eastern Ltd (1999). 4. Huheey J E, Keiter E and Keiter R, <i>Inorganic Chemistry</i> , Harper Collins College Publisher (1993).	