

INORGANIC CHEMISTRY (BS-ADP 8th Semester)

Module Code:	Chem-452
Module title:	Bio-inorganic Chemistry
Name of Scheme:	BS-ADP 8th Semester
Department:	School of Chemistry
Faculty:	Science
Module Type:	Compulsory
Module Rating:	2 credits

OBJECTIVES

The aim of this course is to provide the concepts for better understanding of biological systems and chemistry working behind various physiological processes. The students will learn about inorganic chemistry in biological systems and various medicinal compounds used for curing disease by heavy metals toxicity.

SYLLABUS OUTLINE:

1. Biological aspects of inorganic compounds:

Energy sources for life, metalloporphyrins. Photosynthesis, Chlorophyll, Respiration, Heme and Non heme proteins, cytochromes, Nitrogen fixation: in vitro and in vivo, the biochemistry of Iron, calcium, magnesium, Sodium, Potassium. Essential and trace elements in biological systems, biochemistry of the nonmetals: Carbon, Phosphorus, Oxygen, Silicon. Toxicity of heavy metals in biological systems, medicinal chemistry, chelate therapy for curing disease by heavy metals toxicity.

RECOMMENDED BOOKS:

1. Inorganic Chemistry by James E. Huheey 1983 Harper International London.
2. Advanced Inorganic Chemistry by F.A. Cotton and G. Wilkineon 1972, Interscience, Publishers, London.
3. R.D.Madan, Satya Prakash's Modern Inorganic Chemistry, S. Chand Company and Ltd, 2002.
4. J.D.Lee, Concise Inorganic Chemistry, 5th Edition.