INORGANIC CHEMISTRY (BS-ADP 8th Semester)

Module Code:	**Chem-454**
Module title:	**Organometallics**
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 advance study in inorganic chemistry and other interdisciplinary subject related to inorganic chemistry. The students will learn about inorganic chemistry in biological systems, organometallic compounds (synthesis aspects, structural and bonding aspects).

SYLLABUS OUTLINE:

Organo Metallic Chemistry:

(a) Introduction to organometallic chemistry

Nature of carbon-metal bond, General synthesis and properties of organometallic compounds, Classification ($^{c}n_2$-bonded olefin, n_3-allylic, n_4-cyclopentadienyl, n_6-organometallic compounds).

(b) Structure and reactivities

Experimental techniques in Organometallic chemistry, oxidative-addition, reductive elimination, insertion and de-insertion reactions, fluxional behaviour. Applications of organometallic compounds. Characterization of organometallic compounds with the help of IR, NMR, mass spectrometry etc.

RECOMMENDED BOOKS:

1. Organotransition metal Chemistry by Akin Yamamto, 1986, A. Wiley Interscience Publication London.
2. Inorganic Chemistry by James E. Huheey 1983 Harper International London.
3. Advanced Inorganic Chemistry by F.A. Cotton and G. Wilkineon 1972, Interscience, Publishers, London.
4. Comprehensive organometallic chemistry, M. Imran, H. M. Farooq, Ilmi Kitab Khana, Lahore, 2019.
5. J.D.Lee, Concise Inorganic Chemistry, 5th Edition.